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ORIGINAL LECTURES.

ACUTE CATARRH OF THE MIDDLE EAR.

Two Lectures.

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LECTURE I.

GENTLEMEN: This affection is an inflammation of the drum cavity and Eustachian tube, of an essentially catarrhal nature. That is, it is of the milder order of inflammations, of a mucous membrane, the products of the inflammation being only serum or mucus. The same inflammation intensified so as to produce a purulent discharge, is placed in the category of purulent inflammations.

Acute catarrh of the tympanum shows comparatively little tendency to destroy tissue, as is the case in the purulent disease, and as a result the membrana tympani is frequently not perforated, as is the rule in the other form. If the membrane is perforated, it is not likely to be the result of ulceration, which might produce a large opening, as in the purulent form, but rather of pressure from inflammatory products in the tympanum, and a fissure-like perforation, which rapidly heals, is likely to be the result. Inflammatory proliferation is much more likely to result than disorganization.

This affection is usually developed from some form of throat trouble, but may also depend on causes located externally. It may attack both ears simultaneously, but is more likely to attack the second ear, one or several days after the first. It may again attack one ear alone, but as the condition of the throat is usually at the bottom of the matter, sooner or later both ears are likely to be involved.

The attack generally comes on towards evening or in the night, the symptoms subsiding by morning, to recur again on the next evening unless interrupted by treatment. Its tendency to return whenever there is exposure to cold, or when the patient has been irregular in his habits, is well enough known. This is one of its most serious features, and often leaves the patient in a state of incurable deafness, unless great care is taken to treat symptoms promptly as they arise.

The *subjective symptoms* are about as follows: In a given case there may be a sore throat that has existed for a few hours or days, when a painful sensation is felt in one side of the throat, on which there may have been the greatest amount of trouble, which passes up the Eustachian tube towards the ear. After a little time the ear may have a full or stuffed feeling, which may be converted into a violent throbbing pain. The voice of the patient will sound hollow and out of pitch, the patient *feeling* it unpleasantly in the ear, for precisely the same reason that the tuning fork on the teeth is heard better in the ear affected with middle ear disease. Dr. Sexton, of New York, has called this symptom *autophony*.

The pain goes on, in a severe case, to a most intense degree, until secretion is inaugurated, or the membrane is perforated, when, with many premonitory loud crackling sounds, which may send sharp, darting pains through the ear, relief is experienced. I infer that the crackling sound depends on interchange of air between the throat and the tympanum. In very mild cases where there is scarcely any actual pain, this crackling is

the most noticeable symptom of all. The Eustachian tube normally is nearly or quite closed in a state of quiescence, and by its valve-like faucial extremity resists to some extent the passage of air from the throat to the tympanum. When in a catarrhal condition, if the inflammation be not too intense there seems to be a relaxation of the tissue about the mouth of the tube, or the swelling of the lips of the tube prevents exact coaptation, and the consequence is that air is forced in or drawn out of the tympanum, causing this crackling sound. In other words, the tube is easily *forced*, and it will be found that Valsalva's operation is more readily performed than even in the normal state. Anything that condenses the air in the upper pharyngeal space will produce this symptom, as sneezing, coughing, blowing the nose, rapid expiration, especially if done through nostrils of narrowed calibre—which is likely to occur from the rhinitis so often accompanying this disease—eructations from the stomach, etc. When air is forced in with violence, much pain may be occasioned. On the other hand, rapid inspirations, especially if done through narrowed nostrils, rarefies the air in the upper pharynx, and air is forced from the tympanum into the throat.

When the auricle is pulled upon there is likely to be little or no pain, as the meatus and region about the concha are less frequently involved than in the severer forms of suppurative disease. Movements of the jaws, deglutition, sneezing, coughing, or talking, are often painful. If there are severe throat complications, the swallowing of cold water may cause exquisite pain. Movements of the head from side to side are often painful. There may be tenderness in the scalp, and pain in the side or back part of the head. Occasionally in the severer forms of the disease, there may be pain and tenderness in the mastoid region. The pain in the ear may extend forward to the teeth, and, indeed, may be more intense there than in the ear, just as in carious and painful teeth, the sensation may often be only in the ear. It is due to the fact that filaments of the fifth nerve are distributed both to the ear and teeth. In milder forms of the disease there may scarcely be any disagreeable symptoms except itching, deep in the meatus, which the patient often effects to relieve by scratching or thrusting his finger deeply into the ear, which frequently occasions throbbing and often results in much pain, with great aggravation of what were mild symptoms.

Sometimes the pain in the ear depends solely on the pressure of air upon the outer surface of the membrane the result of an insufficient pressure upon the opposite side. This is brought about by closure of the Eustachian tube, the consequences of the disease, the residual air in the tympanum soon becoming absorbed. There is great rarefaction of the air, amounting almost to a vacuum, and the membrane pushes the ossicles sharply inward, and the labyrinth waters are compressed by the settling of the base of the stapes into the oval window. I one time heard that Dr. T. G. Thomas was so interested in the result of an inflation of the tympanum in the person of his coachman, that he related the case before his class. The man had a mild form of tubal catarrh, which caused great pain. This was instantaneously relieved by Politzer's inflation. This pressure, incident to a collapsed membrana tympani, sometimes produces a feeling of fullness in the ear, difficult to diagnosticate from that of hyperæmia.

Deafness.—In the outset, before hyperæmia becomes excessive, and the parts are absolutely free from secretion, the ear being in a state in which irritation seems to predominate over inflammation, the hearing may be either morbidly acute, or sounds may seem to be heard with painful distinctness. Very soon a slight diminution of hearing is observed, or it becomes so profound that loudly spoken words cannot be distinguished. The deafness results from the following conditions: hyperæmia of the tympanum, producing pressure upon every portion of the contents of the tympanum, impeding the vibrations of the membrana and ossicula. This congestion may also extend to the labyrinth, and interfere with the function of the acoustic, for the time causing true nervous deafness, which may be recognized by the tuning fork.

Again, after the stage of secretion commences, the tympanum becomes more or less filled with the products of inflammation, which obstruct hearing by the retardation of vibrations. Naturally, filling the tympanum full, with bulging of the membrane, would produce profound deafness; but it has been found that a small amount of secretion may much retard hearing. I once removed one or two drops of serum from the tympanum by paracentesis and inflation, and the hearing was astonishingly improved. I believe that the smallest amount of mucus, resting on the round window, will interfere noticeably with the hearing, or any clogging of the movements of the base of the stapes by the same process will also much interrupt its function. Even if mucus smears the inner surface of the membrana tympani, and clings to the ossicles, there is interruption to free vibrations sufficient to cause deafness. There is another cause of deafness, more important than any I have mentioned—that is, the sinking of the membrana tympani, in consequence of closure of the Eustachian tube. In consequence of this collapse, the membrana tympani is put upon the stretch, the ossicles are crowded together, the base of the stirrup is driven into the oval window, the labyrinth waters are pressed upon, and the membrane of the round window may be pressed towards the tympanum.

Here are two causes of deafness, first, the interference of free vibrations of the apparatus of the middle ear by this pressure, and second, actual pressure upon the labyrinth. Whether this latter acts by pressure directly upon the nerve of hearing, or by the interference to the conveying of the sonorous undulations incident to increased pressure upon the labyrinth waters, it is hard to say. In my observations on the tuning fork and bone conduction, it will be seen that I incline mainly to the opinion that interference in the vibrations of the middle ear mechanism, is the principal factor in the causation of the deafness. The deafness generally comes on suddenly, the patient describing the ear as having suddenly closed up.

From the conditions just described, we have certain extremely disagreeable symptoms, namely, tinnitus aurium, hearing one's own voice too distinctly, which may also have a hollow reverberating sound, a stuffed feeling, or a feeling as though the ear was filled with some foreign substance. The latter symptoms may point indifferently to engorgement of the tympanum or a sunken membrana tympani. Another symptom dependent on pressure is vertigo. It may be so great that the patient has fears of falling out of bed.

Frequently, there may be no fever, and again, there may be a violent febrile movement. Sometimes delirium may be noticed, especially in young children. Many of the symptoms may simulate brain trouble.

Subjective symptoms.—In the first instance, there is likely to be signs of catarrh of the pharynx, with or without pharyngeal or laryngeal symptoms. The upper pharyngeal space is the one to critically examine; for

the description of which, see naso-pharyngeal conditions giving rise to ear trouble. Naturally the rhinoscope will be needed here, and other instruments for examining the Eustachian tube. Externally, the meatus may show few signs of disease, except being reddened perhaps, and scruffy. The speculum auris may elicit some tenderness.

The membrana tympani is the important point of observation. It is true there may be a catarrh of the tympanum, without redness of the membrana tympani, provided it be sufficiently mild, but the membrane may show undue brightness of the light spot, from opacity of the mucous layer; hence, the augmented reflection at the umbo. Besides, the membrana tympani will not present the normal pearly-gray translucency, but will look flat or opaque, and of a darkish hue. Where the membrana tympani has become sunken, there will be the following changes: The malleus handle will be too vertical, or too horizontal; it may be drawn inward, giving it a *fore-shortened* appearance, it not appearing to approach to the centre of the membrane, but at a point upward, and generally backward. In consequence of this movement, the short process will be thrown outward, appearing too prominent. The light spot when present, will usually be too small; a better diagnostic, however, is a malposition of the reflex; it will present an acute angle with the anterior border of the malleus handle, or its angle may be too obtuse; it may be too near the centre of the membrana tympani, or be displaced towards the periphery. The folds of the membrana tympani may become greatly exaggerated, especially the anterior fold. The membrane may, sometimes, not be reddened at all. Again, where the mucous layer is intensely reddened, the membrana tympani will be more opaque, and when it still retains some translucency in its outer layers, this color may shine through as a faint dusky red.

The whole membrane may be congested so as to be completely reddened, but not of the intense red color described in suppurative otitis. More likely, however, the redness may be seen about the short process; after a little, a streak of redness may be seen coursing down the malleus handle, from congestion of the manubrial plexus of vessels. With a greater degree of hyperæmia, vessels may be seen shooting from the periphery to join those of the manubrium, when the whole of the membrane may become reddened. It is quite easy to discern individual vessels. Be careful to discriminate between the hyperæmia which is the result of disease, and that which is a consequence of traumatism. Rough handling of the ear in fixing the speculum or violent inflation of the ear will cause considerable redness of the membrane. If a number of persons examine an ear with a pretty hot artificial light, some congestion probably will result; where collection exists in the tympanum, the membrana tympani may bulge; if so, it will be generally found in the posterior superior quadratus and will seem to merge into the meatus; occasionally it may bulge in front as well, and the manubrium will seem to divide the membrane into two portions. If there is not too much congestion, and the outer layer is intact, a light reflex may be seen on the summit of the ectasia.

Again, if there is a collection in the tympanum with no change in the position of the membrana tympani, the light spot being against an opaque fluid will appear excessively bright and even glassy. I have often diagnosed fluid in the tympanum by this symptom alone. If the subject is not too old with an excessively opaque membrana tympani the fluid may be seen through the membrane. It will give the latter a darker hue, perhaps of a yellowish or greenish cast. If there is considerable mobility of the fluid, its level may be changed by tilting the head forward or backward, or

cause it to disappear altogether by turning the head sharply to the opposite side. If inflation is done, the level of the fluid is changed, and often air bubbles may be seen about the top of the fluid, which are somewhat conspicuous.

By the use of Seigle's otoscope a hint may be gained as to the presence of fluid in the tympanum. If the membrana tympani is pushed sharply in, the fluid will rise, or it will recede if the opposite movement is made. The malleus handle fails to make the normal lever-like movement when any considerable collection is present. In rare cases it may be possible to assert that the contents of the tympanum is mucus or blood, by its color, but none but those very expert can determine this. Sometimes the fact of fluid in the tympanum may be elicited by auscultation with the diagnosis tube, a moist rattle or click is heard instead of a dry one, and the bursting of air bubbles in the tympanic fluid will yield a peculiar crepitating râle, which much practice will enable the surgeon to distinguish.

The diagnosis of acute catarrh of the tympanum is sometimes difficult. Very great pain with speedy rupture of the membrana tympani, and a purulent discharge proves that we have the suppurative form. In the mild cases where there is little or no redness of the membrana tympani, with the presence possibly of carious teeth, there will be real difficulty in determining whether the trouble comes from the ear or the teeth; sometimes it will be both. The use of the tuning fork, testing the hearing by other means, and contrasting the amount of hearing before and after inflation, making careful observation as to the presence of fluid in the tympanum, etc., will settle the diagnosis. Where there has been an old catarrh with impairment of the hearing, but which is improved by inflation, it is very difficult to tell whether it is the teeth or the ear which causes the disturbance. I have before now been in doubt, and have caused the teeth to be attended to, and the pain has disappeared. The pain from the ear is often of a neuralgic character, and may be indifferently in the head or ear, and will sometimes mislead us. In such cases it may be found that the pain does not follow the laws of a neuralgia, and some disturbance in the function of the ear may be noted.

In the adult there need be no trouble about mistaking brain symptoms for ear symptoms. In children there is much greater difficulty in diagnosis on account of absence of rational signs. I have, in the person of my own children, made this observation. The child would be restless most of a night, and no cause could be assigned for the trouble, when in the morning a discharge from the ear revealed the correct explanation. I think we are too loth to examine carefully the membrana of children. In a case of considerable pain in a young subject, naturally we look to the bowels or head, or possible the teeth for the explanation, but if we always have in our mind a suspicion that it may be the ear which causes it, we shall be sufficiently on our guard. In a suspected case, if we do not too much object to do it, a hint may be gained by smelling the ear, when, by its peculiar odor, attention is at once directed to a diseased condition, if there be the slightest discharge. A little harsh handling of the ear may elicit tenderness, pointing to disease. If the patient has throat trouble of any kind, or has present the conditions which may give rise to ear trouble, we are put upon our guard. A little sufferer from ear pain, may reach the hand to the head and indicate the location of the trouble.

In the pneumonia of children, ear complications frequently arise which will give us a hint to inspect the ear when necessary. In examining a suspected ear in a child, even though we find no redness, we find great retraction of the malleus handle, which in children is

a more conspicuous symptom than in the adult, and if it is very horizontal, and the opposite ear is normal, we suspect ear trouble. We inflate by Politzer, and the membrana tympani is restored to a more normal position, and the patient may be relieved from suffering, when the diagnosis is pretty well settled. Other means for the relief of pain in the ear may be used, and if they succeed, the fact points to the probability of ear trouble as the cause of the pain.

The causes of acute catarrh of the tympanum are so similar to those of the purulent form that I hardly need go into detail.

The first important factor in the pathogenesis is the inflamed throat. This may be excited by any catarrhal influence whatever.

The exanthemata are always liable to result in ear trouble consequent on the throat complication. Croup and diphtheria produce conditions in the throat liable to cause ear involvement. Some fevers may be accompanied by throat symptoms which sometimes result in ear complications.

Pneumonia and pleurisy are often accompanied by acute ear troubles, which depend, first, on the accompanying throat disease, and second, upon the violent interchange of air between the throat and ear, consequent on the rapid respiration incident to these diseases. This has been already explained. Besides producing labyrinth trouble, syphilis may, by its somewhat constant throat symptom, develop middle ear disease, without necessarily going deeper. Bright's disease, through defective blood vessels, may result in middle ear trouble; but, hemorrhagic disease through rupture of the vessels is more likely to occur. Whooping cough, by violent inflation of the ear during a paroxysm of coughing, sometimes ruptures the membrana tympani; but the violent inflation itself is sufficient to excite inflammation. Politzer's inflation may sometimes excite a catarrh of the tympanum. Tuberculous patients are strongly inclined to catarrh of the tympanum, in consequence of the extension of some form of bronchial or naso-pharyngeal catarrh, to which they are so subject, to the ear. Tuberculous matter (a cheesy material), in the tympanum, often results in middle ear catarrh.

Sea bathing, as in the case of suppurative trouble, excites this affection in several ways. Breakers striking the ear may rupture the membrane, or even if not ruptured, the cold water enters the meatus, which is enough to excite inflammation. Again, the patient may take the water into the mouth, and in the agitation and excitement, he may attempt imperfectly to swallow it, by which means some of it is forced into the tympanum and excites trouble. Sometimes, in swimming, a wave dashes the water into the nostrils, which, in the strangling efforts to remove it, is often forced into the ears. The nasal douche has inflicted many aural catarrhs upon those who use it, and I have abandoned it altogether. Even snuffing up water into the nostrils from the palm of the hand, has been known to pass into the ears and do harm. In my own practice of sending a few drops of salt and water into the nostrils by means of an atropia-dropper, it has occasionally passed into the ears, with deleterious effects.

The irritation of carious teeth, or even the advent of the wisdom tooth, has been known to excite an otitis. Teething in children has long been asserted to be a cause of otitis, and I do not doubt that it is—less frequently, however, than it is asserted to be. The cold pack in water cures, or the Turkish and Russian baths, have been known to excite this disease. As aural catarrh is more prevalent in the spring and fall, when the air is changeable, we easily infer that catarrhal influences are at work. Exposing the ear to a draft of air in any manner may provoke a catarrhal

attack. Taking cold, even though it be very slight, may, in those so predisposed, go to the ear. Another fact is of great interest, that the patient is much more likely to "take cold" when depressed, from any cause whatever, it apparently requiring a constant exhibition of vital energy to resist the inclement weather of our latitude. Many patients require cotton in the ears during the winter to keep them from becoming inflamed and painful.

ORIGINAL ARTICLES.

WHY SEWER TRAPS ARE UNRELIABLE, AND HOW TO APPLY THE OUNCE OF PREVENTION AGAINST DISEASE GERMS IN SEWER AIR.

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THE practical bearings of this paper upon the life and health of 50,000,000 of human beings exposed here and in Europe to emanations from sewage are, it seems to me, so vitally important that I propose to commence by giving its salient points so closely condensed that they may be glanced over by the busiest reader. In the following pages, then, I assert—

1st. That, according to the germ theory of disease in the form for which during the past fifteen years I have been an earnest advocate,¹ diphtheria, typhoid fever, scarlet fever, and probably other contagious diseases, are connected with, if not solely due to, the development of spores or germs of vegetable organisms in the human body.

2d. That these germs propagate in sewers and float to us on the sewer air, penetrating into our dwellings through water closets, sinks, stationary wash-stands, etc.

3d. I have just discovered that the reason our various ingenious traps fail to protect us against these fatal sewer diseases is that sometimes a layer of micrococcus and mycelium creeps along the interior of the contrivance until it forms a new depot of development in the slimy vegetable lining extended into the *inner or house side* of the trap, from which, without obstruction, its deadly germs may be given off into the very bed-chambers of its victims; therefore,

4th. The true method of obviating this danger is by sterilizing with slow currents or drippings of solutions of sulphate of iron, corrosive sublimate, arsenic, carbolic acid, etc., the whole interior of our waste pipes, just as the shores of the Dead Sea and the banks of certain small streams are sterilized by mineral ingredients, or poisonous metallic substances from manufacturing refuse, with which their waters are mingled.

The first proposition above enunciated needs no defence with believers in "organic entities" as causes of disease, and to the conservative majority

of our profession who still doubt the germ theory, I would urge that sanitary precaution in accordance with its doctrines is now an imperative duty, since this hypothesis has been accepted by such a respectable minority of physicians, including a large proportion of those whose special studies of medical microscopy have best qualified them to judge its merits. Only a duty, I admit, however, as yet, *provided* these precautions do not themselves involve danger to health; do not interfere with other safeguards dictated by rival theories of disease; and are not so troublesome as to be practically inapplicable.

I cannot claim in support of my second proposition that I have ever yet propagated any of the disease poisons in a sewer, and yet the innumerable culture experiments of Koch, Klein, Pasteur, H. C. Wood, and a host of their disciples, have so conclusively shown that the conditions of algoid growth are warmth, air, moisture, and nitrogenous matter, that I think there can be no reasonable doubt that propagation of disease germs does frequently occur in sewers, where it is incontestable that these necessary physical conditions are *all* abundantly present. I have determined by direct observations upon the gelatinous films of vegetable growth lining waste-pipes communicating with sewers, the presence of micrococcus, bacteria, and mycelium, morphologically identical with those of diphtheria, and of Klein's pig-typhoid fever; and since the condition of existence for the common forms of these low vegetable organisms and for the disease germs are known to be similar, it becomes, I think, certain that in situations where I found abundant algoid spores and mycelium, the disease germs of diphtheria, typhoid fever, etc., could have propagated themselves had they happened to find a lodgement. Lastly, as direct evidence from the clinical side of the question, we have such suggestive records as the following "stub-born facts:" Dr. Wm. N. Thursfield, of Birmingham, England, reports tracing an isolated case of diphtheria to temporary exposure to "sewer gas" in a house on a short line of sewer which he *knew* to be specifically contaminated by diphtheria. This sewer, when opened and examined by a surveyor, produced in him a severe diphtheritic attack (*London Lancet*, August, 1878, p. 211). Dr. Wm. V. Keating details at length four cases of typhoid fever attributed to sewer gas from untrapped drain pipes, and refers (on page 117) to cases of measles, scarlet fever, and diphtheria in two other families apparently from the same cause (*Trans. of College of Physicians of Philadelphia*, 1879, p. 85). Dr. C. W. Chamberlin, of Hartford, relates a remarkable case of fatal erysipelas seemingly due to sewer gas from a waste pipe carelessly left open beneath the bed of the patient (*Connecticut State Board of Health Report for 1880*, p. 5). Dr. Geo. Wilson quotes the account of 20 out of 22 boys at Clapham, England, in 1829, who were attacked with violent vomiting, purging, and fever within three hours after standing over a choked-up drain, watching the workmen clean it out (Wilson's *Handbook of Hygiene*, 3d American edition, p. 68). Nor are these isolated instances, for the medical journals of America and Europe record numerous

¹ See Experiments showing the occurrence of Vegetable Organisms in Human Blood.—*Amer. Journ. of Med. Sciences*, July, 1868, p. 291. *Handbook of Medical Microscopy*, Philadelphia, 1871, pp. 196, 252. *The Germ Theory of Disease and its present bearing on Public and Personal Hygiene*.—*Penn Monthly*, Nov. 1878, p. 858.

similar examples of dangerous or fatal effects from disease poisons in sewer air when inhaled by human beings.

The most important fact mentioned in my third statement was discovered in a purely accidental manner, as follows:

On moving into a new residence I had all the stationary washstands fitted with ball-traps of the most approved construction. Noticing, however, after a few months, that the flow of waste water through one of them seemed to be impeded, I unscrewed the glass cup which forms the lower segment of the trap for the purpose of removing the obstruction, and was surprised to find what appeared to be a fragment of thick black blotting paper hanging from the vertical pipe. On further investigation I discovered that this was part of a continuous lining to the upright tube of the trap, which lining extended a little above the ordinary water level on the inner or house side, and in order to determine its nature I detached a portion for microscopical examination. At first I did not appreciate the tremendous importance of my observation, but on finding, under a power of 1250 diameters, that the film was a felted mass of mycelium, bacteria, and micrococcus, I realized at once that the existence of such a lining of vegetable growth completely through the trap from its outer to its inner limit accounted for the penetration of disease germs through the best of these contrivances, and explained that frequent and deadly entrance of sewer infection through apparently tight traps which has been the despair of plumbers, sanitary engineers, and hygienists. Manifestly if the bacteria of putrefactive decomposition which make up this filthy coating, called *seilhaut* by the Germans, and probably in their growth give off the disgusting odor popularly known as "sewer gas," could thus intrude to the house side of the trap across the microscopic inequalities of the surface to which the ball "fitted air-tight," the micrococcus of diphtheria could likewise penetrate by the same occult but infallible pathway, and only chance had saved me and my family from similar access of typhoid fever or other pestilential germs. And it is further obvious that the various theories to account for sewer infection in spite of air-tight traps, such as the siphoning out of traps, their partial corrosion and leakage, the absorption of sewer gas by the fluid sealing them, and its evolution from the inner or house surface, etc., may be relinquished.

Fourth, as a remedy for offensive sewer emanations, solution of sulphate of iron (common copperas) has long been known, and I am strongly inclined to hope that in it, when *properly and systematically applied*, we have an agent capable of making the surface of waste pipes unfit for vegetable growth or life, and so rendering these conduits completely sterile, just as certain weeds may be killed and conquered by watering the ground where they grow with a strong saline solution. American inventive genius will probably supply a variety of contrivances for applying suitable parasitocides for this purpose as soon as any demand for them shall arise, but in the mean time I would suggest the use of the following simple apparatus which has proved

quite successful in my own residence. Fit a half-gallon bottle with a tight, perforated cork carrying a glass tube about three-sixteenths of an inch in diameter; fill the bottle with solution of copperas of the strength of one ounce to the pint of water, adapt the cork and invert the bottle over the basin (for example) of a stationary washstand, so that the fluid may slowly drip down the waste pipe. The apparatus may be conveniently supported on a board laid across the basin, and having near its centre a two-inch hole into which the neck of the inverted bottle is inserted. A pint or so of the same solution should first be poured down the holes of the overflow pipe, and the best time to use the contrivance is on going to bed, so as to leave the trap full over night of the mineral solution. Application in this way twice a week has so far seemed to answer the purpose in my house, but a still more effectual method would be to have a stop-cock placed in the waste pipe a foot or two below the trap, and every night or two closing this, fill the former and the adjacent portions of pipe with copperas solution.

I believe we will only effectually combat these multitudinous disease germs, when we fully realize that they are each struggling to live and reproduce their kind, just as are the higher plants and animals throughout the whole course of Nature.

The fact that thistles and other noxious weeds so soon appear in neglected fields or gardens, shows beyond dispute how widely, and yet how imperceptibly, their seeds are disseminated, and how eager these seeds are to seize every chance for reproducing themselves after their kind, whenever and wherever suitable warmth, air, moisture, and nourishment happen to be afforded them. Even a little handful of earth in a rocky crevice is often forced to support some wandering nettle or poison-ivy, and its progeny of organisms hurtful to man, perhaps through a long series of generations.

In like manner, apparently, every diphtheritic spore and typhoid fever germ strives with all its puny might to live and grow and multiply itself, in the blind hope, as it were, that one of its iniquitous progeny will succeed in fastening upon some human being, whose affirmative power of constitution (as Emerson so aptly called the Life Force) is feebler than its own, and so accomplish its malevolent destiny. And whilst millions of such germs die for want of moisture, warmth, air and nitrogenous matter, and hundreds of millions flourish uselessly, because they cannot gain access to mankind, a few (relatively) out of these vast numbers steal past air-tight traps in the manner I have pointed out, and, establishing themselves on the inner side of such "safeguards," may be reproduced luxuriantly, and, under favorable circumstances, succeed in sending some of their descendants to inflict upon us the well-known disturbances of health which characterize the different contagious diseases.

Varied and prolonged courses of experimental inquiry will doubtless be requisite for deciding numerous minor details, and especially just how often waste-water pipes must be bathed with solutions of mineral substances, in order to secure the desiderata

above indicated. But I am confident that the key to this momentous problem, of how to avoid infection from "sewer gas," or, more correctly, sewer air, entering our dwellings, is to be found in the principle of *so sterilizing* the whole interior of all pipes communicating with sewers, and, if possible, of the sewers themselves (by frequently irrigating them with fluids containing metallic compounds *poisonous* to plant life), that no vegetable organisms can propagate within them. Under such circumstances, *disease germs*, even if they penetrate for short distances through imperfect traps, will be powerless for evil, because a noxious element being introduced into their environment, the harmoniously favorable conditions necessary for their development and reproduction are disturbed.

HYPODERMIC INJECTION OF COLD WATER FOR THE RELIEF OF PAIN.

BY S. J. RADCLIFFE, M.D.,
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CASE.—I was called about 6 P.M., October 22, 1881, to see Mrs. B., aged 35 years, short in stature, stout, round in figure, mother of four children, youngest 4 years of age, nervo-sanguineous temperament, looking in perfect health.

She said she had rarely been sick; had indeed always enjoyed good health. Her husband informed me she had had, some years previously, attacks of hysteria, and it always seemed to be associated with symptoms of malaria. I treated her in May, 1881, for a sharp attack of acute bronchitis with bloody expectoration, lasting some two or three weeks, from which she recovered well.

She said she was suffering from exceedingly severe neuralgic pains about the waist, stomach, and under the right breast, following a chill which occurred about noon that day. She said she thought she had been suffering from malaria for some time, for which she had been taking quinia almost daily, but in spite of the quinia the malaria had culminated in the chill and fever, leaving her with the terrible pain for which she now sought advice.

She was in bed covered up in blankets and bed-clothes. Her pulse was regular, a little accelerated, respiration hurried, temperature normal, some moisture of surface. She said her bowels were regular, her uterine function normal, her appetite fair, and she usually slept well. There was no evidence of debility or anæmia. Digestion and assimilation were perfect; she was well nourished. The only history of malaria was that given above.

Physical examination revealed no enlargement of spleen, no trouble of heart or lungs; there was no tenderness on pressure over the side or abdominal region. There was neither headache nor other cerebral symptom. The pain in the side and breast was the only symptom of which she complained, and she described it as of the severest character, impeding respiration and causing her to gasp for breath, and surpassing any pain she had ever had.

I injected $\frac{1}{3}$ grain morphia sulphate hypodermically in her right arm, on the side of the pain, and directed her to continue the quinia and also to

take 20 grains potassium bromide three times daily, beginning the next morning.

On the 23d she was better. The morphia relieved her, she had slept comfortably all night, and felt no symptoms of chill and had no pain.

She had no paroxysm and was free from pain on the 24th, and also on the 25th, and she was ordered to continue the quinia and bromide as directed.

On the 26th, three days after the last seizure, on the fourth day, she had another paroxysm, equally severe, she said, as the first, preceded by the chill, accompanied by the same symptoms, and ending in the same lancinating pains—the pain occurring about the same hour of the day.

Her condition when I saw her was just the same as at my first visit. The fever had subsided, the pulse and temperature were but a little above normal, the respiration was a little hurried, the surface was somewhat moist. There was no indication of any great abnormal condition or constitutional disturbance, except the pain, which was the principal feature in the case.

I injected again, hypodermically, $\frac{1}{3}$ grain of morphia sulphate in the right arm, and directed her to continue the quinia, 10 grains each morning, and the bromide three times daily, as previously ordered. She had no paroxysm on the 27th, nor on the 28th, but had one on the 29th and one on the 31st, under the same circumstances and conditions—having the chill at noon, then the fever and the sweating, she said, and then the same excruciating pain—the apyrexias being three days, except the last, which was but two. I injected as before in the arm, $\frac{1}{3}$ grain of morphia at each visit, continuing the same directions as previously given, except to take an additional dose of 10 grains of quinia at bed-time, making 20 grains daily.

She had another paroxysm November 1st, and another on the 2d, and one on the 3d, about the same time of day each day, the last phase of it, the pain, about 6 P.M., as before, at which time I was usually sent for, and I found her always at each visit under like conditions, and begging for relief from the awful pains, which she said were increasing in severity rather than diminishing.

I gave her at each visit $\frac{1}{3}$ grain of sulphate of morphia hypodermically, with the same relief from pain, and the same gratification to her as before—directing the same treatment to be continued as already given. She had no paroxysm, and was free from pain or other disturbance until the 7th, when she had an attack equally as severe as any previous one. She seemed, indeed, to be more hopeless and despondent than ever.

I determined now to abandon all former treatment, especially the morphia, for which I found there was a growing desire, which might lead to the opium habit, and resort to what I might almost call a *placebo*, in the form of hypodermic injections of cold water. I consequently injected 15 drops of cold water in her right arm as I had done before with the morphia. I was surprised to find it relieved the pain quite as well and as promptly as the morphia. All other treatment was now discontinued.

She was well and free from pain on the 8th, 9th,

and 10th, but had another paroxysm on the 11th, milder in type, four days having elapsed since the last, and her condition was very materially improved. I injected again, 15 drops of cold water in the right arm, as I had previously done, which again entirely relieved her of pain, and she remained well and comfortable until the 15th, again four days (the fifth day) since the last paroxysm. Under the cold-water treatment the paroxysm had been delayed until the fifth day—changed from paroxysms occurring daily, and they were neither so intense nor continuous, and the intervals were spent with more satisfaction and freedom from anxiety.

Anxious now to try the comparative value of minute doses of morphia with the cold water, I injected 5 drops of Magendie's solution, observing the same rules as with a larger dose and with the water. I found its action was hardly adequate to relieve the pain, and its effects were only manifest after a considerably more protracted period. In consequence, the next apyrexia was only twenty-four hours. She had another paroxysm on the 16th, and went through the same ordeal as before, the pain, she said, being quite as severe as any previously endured.

I injected now fifteen drops of cold water hypodermically in her right arm as before. The relief of pain was as prompt and complete as in the previous instances, and it was as wonderful as singular to see with what success it acted. Her complaints seemed to quiet or cease in a very short period, and her pains fled with her complaints.

I saw her at short intervals until the 5th of December, twenty days after the last paroxysm, and the same time after the last injection of cold water. She had received no treatment in the mean time, had remained well during that period, and her general appearance was especially good in every particular. Her sickness had left no deteriorating marks, she had not materially lost in flesh, and she stated she could attend to her household duties and take long walks without fatigue, and was not cognizant of any more debility, but felt quite as fresh as before her first attack, and, realizing her improved condition, she said she was preparing to take a long journey to the far West, where she hoped to escape all malarial influences.

Remarks.—It will probably be admitted by all that physicians are called to treat cases where the diagnosis is not always easily made, and the line of treatment is not always apparent. In other words, they find many patients whose disorders are simulated, not always with the view to deception, indeed, but in many cases because of a want of a proper knowledge or appreciation of their condition, and who assume causes and effects with regard to themselves, which are not only not rational, but often lead to error, especially where reliance is placed on the objective symptoms alone, which, however, are in no wise unworthy of notice, and in many cases give all the information we can obtain.

It is in these cases of simulated or pretended diseases that the practitioner is often thrown off his guard, particularly when the patients are persistent in their explanation and view of the case, and stren-

uously insist that they really suffer from the diseases for which they seek advice; and it is only by an independent and firm course that the proper remedies can be applied to counteract the mental, as associated with the physical, malady or condition of the patient.

The majority of these cases are of the better class of society, live well or even luxuriously, seem to enjoy perfect health, appear to have no cause or reason to deceive or desire to complain of disease with which they do not suffer, whose word would be a guaranty of the truthfulness of their assertions, and who seem to be honest in all they say, and desire to be benefited by advice and treatment.

To place such diseases in the category of hysterical disorders would be a rational sequence, for hysteria is eminently a disorder where simulation is most readily practised.

Charcot, in speaking of hysterical ischuria, says: "This leads me to say a word on *simulation*. You will meet with it at every step in the history of hysteria, and one finds himself sometimes admiring the amazing craft, sagacity, and perseverance which women under the influence of this great neurosis will put in play for the purpose of deception—especially when a physician is to be the victim." Dr. Watson says: "The deceptive appearances displayed in the bodily functions and feelings find their counterpart in the mental. The patients are deceitful, perverse, and obstinate, practising or attempting to practise the most aimless and unnatural impositions." And Hanfield Jones, commenting on this, says: "I believe that the majority of the profession agree with these statements, and that the term 'hysteria' is commonly used to designate a patient whose complaints are considered to be more or less exaggerated, and who is not *bona fide* anxious to get well and cease from being the object of nursing and sympathy;" and further, "call them, if you please, weak-nerved, enfeebled, hyperæsthetic, or neurolytic, or anything which implies that solely their physical mechanism is failing or out of gear, but cast no suspicion on their immaterial part, perhaps braver and stronger than your own, which may never have been tried as theirs has." "If, however, no proof of imposition can be discovered, and if the history of the patient shows that she has had much wear and tear of the nervous system, we should be slow to set her down as an hysteric, because she has the classical symptoms more or less markedly." "But when the medical attendant once finds that disorder is simulated, or greatly exaggerated for selfish purposes, he had better conclude that moral treatment is needed, and not medical."

At the same time, to make a common classification of all such troubles under the category or cognomen of hysteria, would not only be wrong in principle, but unwise in judgment. Indeed, this is too often the case, and many times patients are dismissed, after but a casual or imperfect examination, with the remark that there is but little the matter with them, plainly implying that their ailments are purely imaginary, and unworthy of especial attention. That this is wrong, no one will

deny, for it leaves a bad impression upon the mind of the patient, and augurs badly for the healing art, and shows the imperfections of rational therapy; and we should guard against any such presumption, and always give the patient, often times a suppliant for relief, the benefit of the doubt. Errors of judgment or diagnosis, if honest, are excusable—as the eminent surgeon who plunged a trocar in an imaginary ovarian cyst, and found the marks of it on the child after birth—but to pass over the complaints of patients as trifling and unworthy of proper investigation because they are not decidedly manifest or are inappreciable to ordinary observation, makes the practice unfruitful of results, and renders our opinions questionable, and likely to be taken always with a degree of distrust.

With reference to the case reported, there are several points of interest, and the question may arise, whether it was a genuine case of intermittent malarial fever, with its congener malarial neuralgia, a case of simple neurosis, culminating in circumscribed neuralgia, or neuralgia of malarial origin, or a simulated disease, urged on by a desire either for the hallucinating or stupefying effects of morphia.

The prodromal stage she referred to the feeling of malaria, and she described it as a sensation of nervousness and apprehension, sometimes giving her a depressed feeling and a disposition to cry. The paroxysms would come on, she said, about the same time of the day, eleven or twelve o'clock. It was preceded by a certain restlessness, then a shivering or cold feeling, for which she had to go to bed and cover up in blankets, usually taking a dose of whiskey. After some time, varying from one to two hours, fever would succeed, a warmth and glow, and afterwards, towards five o'clock, she would perspire, and then the pain came, for which she especially sought relief. These, she said, were in regular order, the chill always first, and the pain always last. The apyrexias, as will be seen, were at first three days, and then two, then twenty-four hours, and then four days. During the intervals of the paroxysms, she expressed herself as feeling well, with the exception of a little malaise, to overcome which she would usually entertain herself by some home amusement, or go out for a walk.

The pain she described as unendurable, excruciating, unbearable, etc., but expressed herself in regard to it in the most placid, quiet manner, leaving the impression that she bore the severest suffering with the most perfect self-control imaginable. There was no writhing or contorted features, no outcry or other indications of pain, and yet she said she suffered all that could possibly be endured. At this time, the heart sounds were good; respiration regular, but increased; the pulse but slightly accelerated; the temperature normal, or nearly so; the surface a little moist, and the countenance bore an expression of pain or uneasiness. There was only a seeming abandonment to her condition, and a desire for something that would make her oblivious for the time, and which she expected to find in morphia.

Neuralgia is invariably a disease of debility, and we could only expect to find it after a long continu-

ance of the malarial poison, protracting the disease to an unlimited period. In this case there was no exhaustion, no debility or anæmia, no impoverishment of the blood, no want of nourishment. The paroxysms occurred suddenly, after no considerable sickness, at irregular periods, and constituting a fourth stage to a pseudo-intermittent, without a distinct history of malarial poison; and a simple neurosis would probably have resulted only after a long season of depression, anxiety, or other nervous influences acting potentially on a system already weakened by disease, and unable to bear or resist impressions tending to produce this result. There is no doubt there was here a mixed condition, and the main or most prominent symptom was hysterical, although the rhythm of the paroxysms and the clearly expressed pain gave other evidence that there was some other ground for the attacks than mere hysteria, and tended to show it to be either a neurasthenic or neuropathic disease. A prominent consideration in the case is that there was manifest pain, and that hypodermic injections of cold water seemed to relieve and cure it; and if it can be so proven, will it not have a tendency to simplify our therapeutics in the future?

The experiences of Dr. Ponte, related in the *Gaceta Medica di Venezuela* (see *Medical News and Abstract*, Dec. 1881), in which he employed water hypodermically for the relief of pain, seems to come under the same relations as the case reported above, and though he eliminated the imaginative element from the remedy, he does not say whether or not there was any imaginative element or simulation in the cases themselves, and no explanation was given as to the action of the remedy. His cases include intercostal neuralgia, odontalgia, gastro-intestinal neuralgia, with some hundred other cases, treated in the manner described, with good results.

Reference is also made to an article in the *Lyon Medica* (see *Med. Press*, December, 1881, and *N. Y. Med. Abstract*, Jan. 1882), where Dr. Raymond Tripier employs hypodermic injections of aqua fortis to prevent vomiting of food in phthisical patients. He injects a syringeful of very cold water—either before or immediately after the meal—which often causes the cessation of vomiting which had persisted in spite of other remedies. It appeared similarly to stop vomiting in some dyspeptics, and especially in so-called nervous women who dread morphia, but this latter class should be kept ignorant of the nature of the remedy.

The case reported may have been a simulated disease and there may have been a great desire or longing for the peculiar effects of morphia, at the same time it was not relieved any more by the morphia than by the cold water, and to the cold water may be given the credit of final conquest, in making it unnecessary for the continuance of either remedy, and I present it only to exhibit its novelty and to elicit observations and experiments in the same direction.

SULPHATE OF ZINC IN CHOREA.

By E. J. KEMPF, M.D.,
OF FERDINAND, IND.

KATIE SCHMITT, aged fourteen years, was brought to me by her parents for treatment in the spring of 1881. She complained of pains and tiredness in the limbs, accompanied by great restlessness and curious, wriggling, fidgety movements. Her gait is very unsteady, and at times she falls flat to the ground. In walking, the patient seems to drag one leg. She can not keep her hands for a moment in the same place, but convulsively jerks them about. Standing is impossible. The features are almost continually being twisted into the oddest grimaces, and are of a silly, vacant expression.

The parents inform me that this state came on gradually, getting worse by degrees. She could at present hardly feed herself, and when eating would gulp down the food and drink. Dishes or glasses she would at times, when carrying them, involuntarily drop or pitch away. The speech is thick and somewhat affected. The tongue is unsteady, but can be put out with an effort. Saliva would at times dribble from her mouth. Sleep was tolerably sound, the movements ceasing during sleep, though several times she has been found on the floor in the morning. Bowels are constipated. Urine normal, neutral, and offensive. She has no fever and no headache. Scolding her, or fits of crying or fretting, or trying to keep quiet, make matters much worse. The little patient, although very bashful, is lively enough at home; yet she becomes easily fatigued and tired.

I prescribed:

R. Sulphate of zinc, ʒi.
Fl. ex. valerian, ʒʒj.
Water, ʒʒviii.—M.

Sig.—A teaspoonful thrice daily.

Also—

R. Aloes suc., powdered, grs. xxx.
Ext. nux vomica, " viij.
Ex. taraxacum, q. s.

Mix, and make thirty pills. Sig.—One or two at bedtime.

The dose of the first prescription was to be gradually increased, so that after the twelfth day she took ten grains of sulphate of zinc at a dose, or thirty grains a day. The fluid extract of valerian was proportionally increased. The purgative pills were given so as to keep the bowels very loose. No regulations in diet were made, the patient being permitted to eat whatever she pleased. An occasional bath was given the patient, and she was instructed to take out-door exercise freely.

On the twenty-seventh day after she came under my treatment, the irregular movements of the arms and legs had nearly ceased. The patient was otherwise almost well. The medicines were continued for some time after she had entirely recovered.

About nine months afterwards, the patient had a slight relapse, but was quickly relieved by a repetition of the medicines.

Three other cases under my care—Jennie C., Mary

H., and James L.—have been cured by the same treatment.

Sulphate of zinc, accompanied by active purgation, is a well-established mode of treating chorea, and it is undoubtedly, to my mind, the best treatment that we know of at present.

HOSPITAL NOTES.

VIENNA GENERAL HOSPITAL.

(Service of PROF. SPAETH.)

A CASE OF DIFFICULT LABOR.

(Specially reported for THE MEDICAL NEWS.)

ONE of the most difficult labors, occurring since the first day of the current year, and numbering the 1677th in the "Protokoll" of the second obstetric clinic, has recently terminated.

The woman, M. J., twenty-two years of age, Catholic, unmarried, by occupation a servant, born in Kasejouric, Böhmen, in her second pregnancy, was of medium stature, and presented no abnormalities in the osseous system; constitution and general condition were apparently good. Her previous labor had been easy and had terminated spontaneously. She was uncertain as to the time of last menstruation. The course of the second pregnancy was perfectly normal, until some hours before her admission into the wards of Prof. Spaeth, when premature rupture of the bag of waters had permitted all the amniotic fluid to escape. She entered the lying-in-room 4 o'clock P.M., July 18th, giving the history of premature rupture of the membrane, with entire escape of the amniotic fluid some hours earlier, and that the pains had been felt for the first time, 6 o'clock P.M., July 16th.

Examination, immediately upon her admission, of her breasts and external genitals, revealed nothing of an abnormal character. The abdominal tumor was small in size, the walls tightly contracted around the uterus, while that organ itself was in such a state of constant contraction that the fetal parts could not be palpated through the abdominal walls. The fetal heart could not be heard. External measurements gave no evidence of pelvic deformity.

Vaginal examination revealed that the cervix had disappeared, the orificium externum dilated for two fingers, a "conjugata vera" diameter of 10 cm., but the diagnosis of presentation and position of fetus could only be ascertained after prolonged narcosis. After this procedure it was found that the left shoulder was jammed into the pelvis, lying in front, while the abdomen of the child looked to the abdomen of the mother, the head to the left, and the lower extremities to the right. This presentation and position of the fetus, according to the Vienna School of Obstetrics, is termed 1st, transverse presentation; 2d, position.

The labor pains, at this time, were weak.

No active treatment was considered advisable, until the mouth of the uterus was completely dilated, which event took place about ten o'clock, 20th of July. During the 19th of July, the woman had a more or less constant elevation of temperature, which reached at one time 41° C. At eleven o'clock A.M., July 20th, Prof. Spaeth and Dr. Ebrendorfer, First Assistant, had a consultation. Prof. Spaeth expressed himself in favor of turning, either by Braxton Hicks' method, if possible, or by the foot. Dr. Ebrendorfer advised decapitation. This advice was rejected, because the head was elevated to such a degree that the introduction of the decapitator would involve inevitable danger of laceration of the maternal tissues. Braxton Hick's method of turning proved also impracticable.

The woman was then chloroformed, placed upon her right side, and Dr. Ebendorfer, standing to the left side of the woman, introduced the left hand into the uterus, and with an infinite amount of care and difficulty succeeded in grasping the left foot of the fœtus, when, after still greater difficulty in securing rotation of the fœtus, the feet were drawn through the vulva and extraction at once performed. The child was dead, with commencing maceration. The sex was male; weight 3000 grammes; length, 49 centimetres.

The placenta was delivered ten minutes later by Credé's method. The uterine cavity and vagina were thoroughly irrigated with a two per cent. solution of carbolic acid, and iodoform pencils were introduced within the uterus and vagina. Secale cornutum and quinia were exhibited by the mouth in large doses.

The progress of the patient since delivery has been very satisfactory, and recovery is certain.

MEDICAL PROGRESS.

OSTEOGENESIS.—The methods adopted for bringing about a regeneration of bones and joints necessitating resection on account of injury or disease, constitute an advance in surgery of such interest and practical importance as to distinctly merit special consideration. To adopt a measure by which the main support of a limb, when diseased, and not only rendering that limb useless, but also perhaps imperilling life by pain and exhaustive suppuration, can be removed, with not a mere probability, but, in many instances, almost a certain confidence that it will be restored to the patient, is a triumph than which it is hard to conceive one of greater importance among the developments of modern surgery. The subject is of keen interest, and was ably reviewed by Prof. STOKES, in his Address on Surgery, at the meeting of the British Medical Association. Since the time when, in 1865, he witnessed in Lyons many of M. Ollier's experiments, and subsequently repeated them, he has been strongly impressed by what he then learned, and he has since in practice, as suitable cases presented themselves, adopted periosteal preservation in various operations on bones and joints, a procedure with which the names of the eminent surgical trio, Syme, Langenbeck, and Ollier, must for ever be associated. The operative measures on which his experience is based, are resections of the elbow, shoulder, and ankle-joints; resection of the diaphysis of the fibula in its entirety; resection of the greater portion of the ulna; of metatarsal and metacarpal bones; and, lastly, of transplantation of periosteum, as a part of the so-called Indian rhinoplastic operation. Still, though the good results obtained by this practice are, in properly selected cases, not open to question, there can be no doubt as to the existing unsettled condition of surgical opinion in reference to the value of the procedure. This, he believes, arises from a twofold cause, one being traumatic, from insufficient care being taken during the detachment of the membrane; and the second, the non-differentiation on the part of surgeons of the cases likely to be benefited, and those in which the adoption of the practice is, as a rule, attended with disappointing results. As to its value, when the membrane is comparatively healthy, and the patient young, there can be no question. The activity of bone production and other signally gratifying results of the practice must be acknowledged when performed under these circumstances. These results, however, are not so striking when the patient is an adult. In some cases, no bone production whatever is observed, and in others the osteogenetic process is slow, the product weak, and liable to become absorbed. It should

also be borne in mind that, in early life, the membrane has a dual function; one, that of increasing the thickness of bone, and the other the repair of waste. In adult life, it is mainly confined to the latter. This rule, however, is not without exception. He recalled one instance of a man, aged 42, on whom he performed a resection of the upper end of the humerus on account of carious disease. The result was eminently satisfactory; not only was there a reformation of the bone removed, as evidenced by comparative measurement, but also a pseudo-arthritis so perfect as to enable him now, as he had recently learned, to use his spade, to plough, and perform with efficiency all the ordinary duties of an agricultural laborer.—*Brit. Med. Journ.*, August 12, 1882.

TREATMENT OF VOMITING IN PREGNANCY.—Prof. C. BRAUN (*All. Wiener Med. Zeit.*) reports a case to which he was summoned, the patient being regarded as moribund. She was in the first half of her pregnancy and extremely reduced in consequence of intractable vomiting. The physician in charge had decided on producing premature delivery as a last resource. Braun, who has often opposed this practice, decided instead to bathe the vaginal portion of the cervix with a ten per cent. solution of nitrate of silver. This was done, and the surface quickly dried to prevent further cauterization. The success of the treatment was so immediate and so great, that an hour afterward the patient enjoyed a meal of roast veal, and there has been no vomiting since. Prof. Braun thinks that hyperemesis should be expunged from the list of indications for artificial abortion. He has never seen a case of death from hyperemesis. In France, where abortion is frequently induced to relieve this symptom, it is found that the vomiting is thereby stayed in only forty per cent. of the cases, while in ten per cent. the operation has been fatal.—*American Practitioner*, September, 1882.

AN UNDESCRIBED FUNGUS DISEASE OF THE SKIN.—VON HEBRA (*Wiener Med. Blätter*, Nos. 39 and 40, 1881) describes a form of dermatomycosis which has hitherto escaped observation. It is distinguished by its localization, being found always symmetrically situated on the neck, bend of the elbows, and in the popliteal spaces. The fungus is small, seldom rod-shaped, and no organs of fructification have been observed. The affection is distinguished from herpes tonsurans by its not occurring in rings, by the hairs remaining unaffected, by its chronicity, and by the amount of artificial eczema which it provokes. It is most likely to be confounded with eczema. It was chiefly observed in young anæmic girls with a transparent skin. The treatment consists in first mitigating the eczematous inflammation by diachylon ointment, and then applying anti-parasitic remedies.—*London Medical Record*, August 15, 1882.

SURGICAL TREATMENT OF GRANULAR OPHTHALMIA.—The treatment of granular lids is partly medical, partly surgical. M. Brachet, in a paper devoted to the surgical treatment of this disease, records the practice pursued by M. Galezowski (*Recueil d'Ophthalmologie*), in Paris, which appears to have been successful. It consists in the excision, in each eye separately and after the lapse of about a week, of a large fold of conjunctiva from the upper and lower sinus or cul-de-sac. Considerable swelling follows the operation; but as soon as this has subsided—that is, after the lapse of about four days—he applies a crayon of mitigated nitrate of silver to the inner surface of the lids. As a result of this treatment pain diminishes, the cornea becomes clear, and the vision is greatly improved.—*American Practitioner*, September, 1882.

METHODS OF AMPUTATION.—PROF. STOKES in the Address on Surgery, at the meeting of the British Medical Association, reviewed the different methods employed by different surgeons. According to Von Langenbeck, Trélat, and others, the preservation of the periosteum is attended with advantage. The formation of a periosteal curtain to cover the cut surface of the bone and its medullary canal is believed to act as a shield or barrier against septic agencies, and diminish the chance of the occurrence of some of the secondary calamities, notably osteomyelitis, following amputations. The method he has in some instances adopted, and with success, is, making a somewhat quadrilateral-shaped flap at the membrane and letting it fall over the cut surface of the bone. Another method, that of M. Trélat, is to detach the membrane all round the bone for fully an inch below the point where the bone had to be divided, making, in fact, a sleeve-shaped flap. This plan must, however, materially protract the operation.

This led him to consider some other comparatively recent improvements in the operation of amputation, and to bear his testimony to the great advantages to be derived from the adoption of the principle of long anterior flaps, the chief credit for establishing which belongs to the late Mr. Teale, of Leeds.

Gritti's operation undoubtedly owes its parentage to that of Carden; but, although the retaining of the patella and consequent preservation of the normal attachments of the extensors of the leg is a plan as good as it was original with Gritti, still the details of this method prevented the realization of those advantages which in principle it embodied. Hence the modification which Mr. Stokes terms "supracondyloid amputation"—an operation which, retaining the advantages of Gritti's method, eliminates its defects by lengthening the anterior flap, forming a posterior flap one-third the length of the anterior one, suturing the patella and femur together; and, lastly, and most important of all, by making a high femoral section, but one not involving the medullary canal.

The special advantages that may be claimed for supracondyloid amputation are:

1. That the posterior surface of the anterior flap being covered with a natural synovial membrane, the chances of suppuration and purulent absorption are diminished.
2. Any possibility of the split patella shifting from its place on the cut surface of the femur is prevented by the high femoral section, and by suturing the two bones together.
3. The vessels are divided at right angles to their continuity, and not obliquely, as in other flap operations.
4. The existence of a posterior flap diminishes the chances of any wide gaping of the wound; while the anterior flap, being oval, increases the chances of the stump tapering gradually towards its extremity and assuming the form of a rounded cone.
5. The preservation of the normal attachments of the extensors of the leg.

These advantages embody those of both flap and circular amputation of the thigh, and, at the same time, eliminate their defects.—*Brit. Med. Journ.*, August 12, 1882.

ACUTE MILIARY TUBERCULOSIS OF THE PHARYNX CURED BY IODOFORM.—M. GOUGUENHEIM reported the following case at the meeting of the Société Médicale des Hôpitaux, on July 28th. He was called to attend a pregnant woman suffering from pain in the throat, and found a condition of ulceration of the anterior half arches and enormous hypertrophy of the uvula, which reached to the laryngeal orifice. The tuberculous nature of the ulceration was established by microscopic examination of the amputated uvula; there was no

sign of pulmonary tuberculosis. The lesion was extremely painful and the prognosis seemed to Isambert to be very grave. M. Gouguenheim prescribed ethereal solution of iodoform locally, under which the disease rapidly disappeared. A reappearance of the disease was treated in the same manner with an equally successful result.—*Gaz. Hebdom. de Méd. et de Chir.*, Aug. 4, 1882.

NAPHTHALINE.—DR. FISCHER (*St. Petersb. Med. Woch.*, No. 16, 1882) has made investigations into the uses of this article in all directions. It has been in use as an antiseptic in the surgical clinic at Strasburg; and the results arrived at by Fischer are that naphthaline is a very serviceable antiseptic against both bacteria and mycetes. He even believes it to have a certain influence on inorganic ferments. Some kinds of decomposition are checked in a higher degree by naphthaline than by iodoform. Prof. Kohts observed that in the children's wards for diphtheria and scarlet fever not a single case of infection by contact occurred during the six weeks that they were strewn with naphthaline; this showing that it is also operative as a gas. It is further an active poison to all insects, *e. g.*, fleas, lice, acari, flies, midges, moths, and spiders. Against scabies it is used with equal parts of vaseline; birds and mammals bear it very well, although, when large doses were given to dogs internally, dysentery set in. Sometimes the urine is darkened by naphthaline, though never so much as by carbolic acid. It passes unchanged through the urine, but poisoning by it has never been observed, neither does it produce local irritation, although powdered directly upon wounds and ulcers. Its chief advantage is that it is fifty times cheaper than iodoform. One soon becomes used to the smell. In Nos. 8 and 9 of the *Berl. klin. Woch.*, 1882, Fischer further gives the manufacturers' names from whom the best forms of this useful substance can be obtained, which are here enumerated, as they may prove useful. 1. For direct application to large wounds, for packing cloacæ, abscesses, etc., the best form is the naphthalinum albißimum resublimatum of Trommsdorff, chemical factory at Erfurt, price about 1.20 marks per kilogramme; 2. For lighter injuries, and for impregnating the dressings: *a.* The crystallized naphthaline of Trommsdorff, price 60 marks for 100 kilogrammes; *b.* Naphthalinum resublimatum of Ohlgardt and Co., chemical works at Kehl, Baden, about 50 marks for 100 kilogrammes. Besides these, very good preparations are made by Merk in Darmstadt (Hesse), Kuhlbaum in Berlin, etc.—*London Medical Record*, August 15, 1882.

SUPRA-PUBIC LITHOTOMY.—M. LE DENTU reports a successful case of supra-pubic lithotomy in a man aged 71 years, and gives the following *résumé* of his views concerning the operation:

1. Previous distention of the rectum and bladder facilitates the finding of the latter; in subjects affected with inertia of the bladder, the distention should not be pushed too far.
2. The employment of the thermo-cautery will usually prevent infiltration of urine, and favors adhesion between the soft parts and the vesical wall.
3. It is important not to disturb the fatty tissue generally found in the retro-pubic space, and not to incise the bladder behind the pubis, as recommended by Velpeau. Slight tension on the skin, from below upwards, facilitates the separation of the peritoneum and permits of safely enlarging the wound.
4. The use of M. Anger's vertebrated conductor, pressed against the anterior wall of the bladder, gives a good point of support for the thermo-cautery or bistoury.

5. Suture of the soft parts, not including the bladder, should be absolutely avoided, with the exception of one or two superficial stitches to diminish the size of the wound in the skin.

The suture of the bladder, together with the abdominal walls, is dangerous; since, if the stitches pull out of the bladder, infiltration of urine under the superficial layers will be sure to occur. It is especially dangerous in the aged, since it necessitates the use of the retained catheter, or repeated catheterization, both of which proceedings are attended with great danger.

It offers the same disadvantages in adults and children, and perhaps does not even have the advantage of facilitating cure.

It is, however, advisable to insert a stitch at the inferior angle of the vesical wound, and one or two stitches laterally at each side of this angle, so as to unite the musculo-fibrous layers of the bladder, and prevent the passage of urine into the retro-pubic space.

6. The means proposed for conducting the urine through the urethra are useless and dangerous. The insertion through the abdominal wound of a double siphon formed of rubber tube, pierced with holes in the sides, ensures the removal of the entire quantity of urine formed.

7. The retained catheter should only be employed when the patient is out of danger; unless there is some special indication for its use, it should not be used in the first few days after the operation.

In some cases it is to be preferred to repeated catheterization, while in others the reverse holds. In all cases its use must be frequently suspended, since patients usually have great difficulty in learning to tolerate it.

By means of these precautions it is thought that the danger of the formation of a urinary fistula is reduced to a minimum.—*Gaz. Méd. de Paris*, July 1, 1882.

THE SELECTION OF ANÆSTHETICS.—In the Address on Surgery at the meeting of the British Medical Association, PROF. WM. STOKES said that whatever anæsthetic the surgeon selects—whether it be chloroform, ether, or both combined, bichloride of methylene, or nitrous oxide gas—we must admit that, even with the most careful precautions as regards the condition of the patient generally, the anæsthetic selected, the amount of it used, and the mode of its administration, the gauntlet of peril has still to be run. In truth, it is hardly to be expected that an agent which can so rapidly and completely paralyze our senses should not be attended with peril. Of the two anæsthetics, however, that surgeons as a rule mainly rely on—ether and chloroform—much has of late been done to diminish risk by limitation of the amount of the anæsthetic used; by the gradual introduction of it into the system; by the avoidance of ether in infancy and extreme age, in the puerperal state, in hysteria, and also when there is reason to suspect the existence of any acute or chronic form of renal or pulmonary disease. In the use of chloroform the ever-present risk of cardiac paralysis appears to be increased when any functional or organic disease of the heart is present, and is, therefore, in such cases, distinctly contraindicated.

Although the number of accidents connected with the use of anæsthetics is fortunately very limited, still he felt sure that by more accurate knowledge of the facts he has mentioned, by entrusting the duty of administering anæsthetics solely to persons of experience and judgment, and by a stricter adoption of the rule so happily formulated by Mr. Jonathan Hutchinson in reference to the desirability of using chloroform in cases below six and above sixty years of age, the number of these regrettable accidents would be still further largely diminished. In the majority of cases, however, he would

unhesitatingly prefer ether. In using it, there is greater economy of time; it is, with the necessary precautions taken, safer; there is, as a rule, less sickness, and return to sensibility is slower. To obtain these advantages—which, with others, have been so well and systematically formulated by Mr. Teale (*British Medical Journal*, March 11, 1882)—regard must be largely had to the method employed of administering it; and he is of opinion that one in which the air is rebreathed by the patient, as in the inhalers of Morgan, Ormsby, and Clover, should be preferred, as so great an economy is effected thereby, not alone of ether, but of what is of far greater importance, of heat in the air-passages, the inspiration of a large quantity of cold ether vapor tending to induce respiratory syncope.

In these instruments, the inhalation of a combination of ether vapor and carbonic acid gas occurs. It does not, however, appear to be clearly ascertained whether in this fact there is the introduction of an additional element of danger or not. Opinion on this point is still greatly divided. One would say, *a priori*, that there was; but experience has not established the fact.—*British Medical Journal*, August 12, 1882.

ARTIFICIAL PRODUCTION OF MONSTROSITIES.—At the meeting of the Académie des Sciences M. DARESTE alluded to the interval of time, which elapses between the laying and incubation of the egg, as a cause of abnormal development of the embryo, and said that some recent experiments had enabled him to confirm his views. Although, as is well known, the laid egg preserves for some time its germinating power, there finally arrives a time when the cicatrula becomes disorganized, and consequently incapable of producing an embryo. But between the time when the cicatrula is capable of producing a normal embryo, and the time when it is disorganized, there exists a period in which, though living, its vitality is so altered that it is only capable of producing an abnormal embryo.—*Rev. Scientifique*, Aug. 12, 1882.

DIAGNOSIS OF SYPHILITIC DISEASE OF THE LUNG, BY EXAMINATION OF THE SPUTA.—DR. J. E. GÜNTZ, of Dresden, in a paper on the diagnosis of syphilis of the lung (*Memorab.*, Heft 4, 1882), refers to a paper lately published by Cube in Virchow's *Archiv*, containing the particulars of a case of supposed tubercular phthisis, which was afterwards diagnosed to be syphilitic by the detection of gummy material in the sputa, and in which recovery took place. The author also describes a similar case under his own care, in which the diagnosis was confirmed by microscopical examination of the sputa. A man, aged 35, who had contracted syphilis five years before, came under observation with a gumma on the leg, and with signs of consolidation over a small area in the lower lobe of the left lung on its posterior aspect. The patient recovered for a time under injections of bichloride of mercury. A year and a half later, the man strained himself in lifting a heavy weight, and this was followed by hæmoptysis and shortness of breath, without fever or loss of appetite. The previously affected area at the back of the left chest had increased in size, and there were the physical signs of a hemorrhagic infarct. Dr. Güntz presumed that bleeding had occurred around an old patch of syphilitic deposit in the lung. The patient finally recovered. The material which was coughed up, after being freed from blood by soaking in alcohol, showed under the microscope a mixture of granular detritus, groups of granules, cells, fatty matter, etc., some of the specimens showing the appearances depicted in Lancereaux's work on syphilis. Neither blood-corpuscles, nor vessels, nor lung tissue were detected. Some of the preparations were sent to

M. Lancereaux, who informed the author that he found small round cells colored by carmine, such as are found in gummy formations, and that he, therefore, agreed with Dr. Güntz as to the syphilitic nature of the change. The author concludes with the remark that this is only the second case on record, in which the existence of syphilitic disease of the lung has been proved during life, by the coughing up of gummy fragments, and their detection in the sputa.—*London Med. Record*, August 15, 1882.

THE FUNCTIONS OF THE PHRENIC AND INTERCOSTAL NERVES.—At the meeting of the Société de Biologie, held July 29th, MM. HÉNOQUE AND ELVY presented a memoir, in which they considered the reciprocal effects of sections of the phrenic and intercostal nerves on respiration. While they found that section of the last eight inferior intercostal nerves produced very little change in the character of the respiratory, they drew the following conclusions as to the action of the phrenic nerve:

1. Section of one phrenic nerve modifies the respiratory rhythm of both sides of the chest.
2. The section of the inferior roots on both sides, produces less disturbance than the division of a single superior root on one side.
3. Division of the upper root of the phrenic nerves on both sides, produces the most marked modification of the respiratory rhythm.
4. Section of the upper roots on both sides, produces an exaggeration of the inspiratory movement, lasting more than three quarters of an hour.
5. Section, irritation, pinching or ligature of the upper phrenic root produces great pain.
6. The difference in action of the two roots on the action of the diaphragm, appears to lie mainly in the different degrees of amplitude of inspiration.—*Gaz. Hebdomadaire de Méd. et de Chirurg.*, August 11, 1882.

THE HYGIENIC VALUE OF ANTISEPTICS.—At the meeting of the British Medical Association, PROF. STOKES, as an instance of the hygienic value of the antiseptic practice, mentioned that, in the hospital to which he was attached, the building was a very old one, and was not constructed originally for a hospital. None of the more modern arrangements, now considered so essential, as regards heating, light, ventilation, etc., exist. It is situated in a poor, very densely populated part of the city, with tenement houses, dairy yards, cattle sheds, and stables in its neighborhood; and some of the houses in its immediate vicinity have been designated by the Medical Officers of Health as "fever nests." When he was a student there, erysipelas and pyæmia were not unfrequently observed after operations even of no great magnitude; hospital gangrene, too, he has seen several instances of; in fact, these three diseases constituted a grim trio, of which the surgeons had not unnaturally a dread. Let it not be thought that the occurrence of these was in any way to be attributed to want of care and attention to cleanliness. No cases could in this respect be more conscientiously or carefully managed. What now exists? Hospital gangrene is an extinct disease, nor have we observed, during a period extending over six years, a single case of erysipelas, septicæmia, or pyæmia following an operation in which the practice of Lister was accurately carried out; *accurately*, for everything depends on that. The practice has been well compared to a coat of mail, which secures the wearer as long as it is perfect, but any missing link in which may admit the *lethalis arundo*.

Similar testimony to what he and his colleagues can state has been given by many foreign surgeons of eminence, among whom he mentioned Von Nussbaum,

Bardeleben, Thiersch, Von Langenbeck, Volkmann, Esmarch, Saxtorpf, Championnière, and many others.—*British Medical Journal*, August 12, 1882.

BROMIDE OF POTASSIUM IN DIABETES MELLITUS.—The idea of employing the bromide of potassium in the treatment of diabetes mellitus is not a new one. It was first advocated by Begbie, in 1866, who attributed the cure of a case of diabetes to this remedy, but the numerous failures with it subsequently reported threw the drug into discredit. M. FELIZET has endeavored before the French Academy to renew confidence in bromide of potassium for this purpose, and quotes a series of cases of diabetes, in which it was employed with great success, but even he is the first to declare that this remedy cannot be regarded as a specific, a useless precaution, as the very multiplicity of drugs now recommended for diabetes proves that no one of them is a specific.—*Gaz. Med. de Paris*, Aug. 12, 1882.

THE UNION OF NERVES.—M. GLUCK, not long ago, suggested the use of Neuber's "osseine" drainage-tubes (composed of decalcified bone) as a means of promoting the union of divided nerves. His attempts were, however, not successful. M. Vanlair has lately repeated the experiment, avoiding as far as possible any conditions which might have interfered with the results in Gluck's cases, and he has been more successful than the Berlin surgeon. At the first attempt he obtained, in four months, the regeneration of a nerve filament no less than five millimetres in length. From other experiments he has arrived at the conclusion that it will be possible to reproduce nerve segments of almost any length. The details of the operative procedures are not described in M. Vanlair's paper, which was communicated to the Académie des Sciences, and is chiefly occupied by some facts which, proceeding in this manner, he has ascertained regarding the process of regeneration of nerves. These facts corroborate the conclusions of Eichhorst, Ranvier, and Helm, that the regeneration is by a process of peripheral budding. He has also ascertained that a partial restoration of muscular activity, correlative to an anatomical regeneration of the nerve fibres, may occur a long time before the return of cutaneous sensibility. The new growth always commences in the marginal zone of the fasciculi, and only reaches very slowly the axial bundle. Hence the conclusion is drawn that the efficient cause of the proliferation is not the direct irritation due to the division, but the inflammation which spreads from the sheath in consequence of the injury. The maturation of the newly formed fibres proceeds from the periphery towards the centre; the inferior half of the intercalated segment resembles the normal type of structure much more closely than the superior half. The relations which Vanlair has traced between the new segment and the peripheral portion of the nerve are as follows. A distinct fasciculus in the inferior part of the segment may pass through the junction, and then emerge as an altogether independent nerve, to ramify in an adjacent muscular mass. Other bundles pass along the dissociated fasciculi of the peripheral portion without penetrating into their interior, so that a section presents two distinct circumscribed portions, one constituted by young, living, almost microscopic fasciculi, directly continuous with those of the intermediate segment; the other composed of larger fasciculi with degenerate fibres, belonging to the old peripheral segment. Another part of the fibres of the intermediate portion separate and are lost in the connective tissue which forms a swelling at the junction of the old and new portions. Lastly, a small number of new fibres enter the fasciculi of the degenerated fibres,

and pass either into the empty Schwann's sheaths or into the interstices between them, and can be traced for a certain distance from the point of section. Thus the peripheral end seems to be the channel for only a limited number of the new nerve fibres, and to constitute rather an obstacle to the regular progress of the new elements. These observations, if accurate, seem to show that it is a mistake to endeavor to bring closely together the extremities of divided nerves. What is necessary is that the regenerating nerve should be enclosed in some limiting structure such as a Neuber's tube.—*Lancet*, Aug. 12, 1882.

ANTISEPTICS IN EXCISION OF THE KNEE-JOINT.—In the Address on Surgery at the meeting of the British Medical Association, PROF. WM. STOKES said that one of the best tests, if not the best, for the value of antiseptic practice is resection of the knee-joint, as there are so many circumstances that militate against immediate union being obtained after it. In the first place, the cases requiring so formidable an operation are, as a rule, in a condition of great physical exhaustion consequent on long confinement, and probably protracted suffering of mind and body. The wound is of necessity a large one; the operation occupies a considerable time; two large freshly cut bone surfaces are made, between which union is to take place; and, lastly, there is the great difficulty of keeping, no matter what appliance be adopted, the limb absolutely at rest during the process of union. Before the adoption of Listerism, the surgeon anticipated that four, six, or eight months, or longer, would elapse before union took place, and it was always a subject discussed at consultations on these cases, previously to operation, whether the patient would have strength to endure so protracted a suppuration. As an illustration of how changed matters are now, in a series of fourteen of his cases of excision of the knee-joint, the wounds in nine of them united without a trace of pus production; and in the last of them only two dressings were required subsequent to the one applied at the time of the operation, and in seven weeks after the patient was up and going about. Another antiseptic triumph was the case of a boy with extensive necrosis of the fibula, sinuses, and suppuration existing at the time of the operation. He excised subperiosteally the diaphysis of the fibula, and the case pursued a perfectly aseptic course, the evidence of new bone-formation being also incontrovertible. From the fact of there being no pus production subsequent to the operation, notwithstanding the pre-existence of suppurating sinuses, a special interest attaches itself to this case. He can only account for this exceptional circumstance as a result of the careful washing of the sinuses by carbolic acid and zinc chloride solutions. A still more remarkable case was that of a youth who was under his care last November. He trod on a triangular piece of glass, which, having passed deeply into the sole of his foot, was with difficulty extracted. An acute suppurative inflammation, involving the ankle-joint and extending as far as the knee, was the outcome of the injury. There was indicated, by both pulse and temperature, very high fever, and the condition of the patient was most critical. He made free incisions under the spray on both sides of the ankle-joint, and gave exit to pus and synovia in large quantity. Into these openings he injected a weak solution of eucalyptol, and inserted Neuber's drainage tubes. Next day he found pulse and temperature normal, and from this the case pursued an aseptic course, and in less than a month after the patient left the hospital, the foot being in a perfectly normal condition, all motions of its joints being free, and unattended with the slightest stiffness or pain. In another case, he cut down on an ankylosed hip (the limb being so flexed as to be perfectly useless to the patient), and divided the

neck of the femur with an osteotome, and straightened the limb. The wound healed without pus production, and a freely movable false joint was formed, and the patient is able to walk several miles without inconvenience.

Another antiseptic triumph was obtained in two cases of amputation at the hip-joint. In one of these there were pre-existing sinuses and profuse suppuration, and, notwithstanding, he succeeded for eight days, during the most critical period of the patient's convalescence, in keeping the wound aseptic, and preventing the occurrence of surgical fever. The result in the second case was more remarkable; not only during the healing of the wound was there no pus production, but pulse and temperature hardly ever rose beyond the normal standard. The skin was unbroken, and on the evening previous to, and also on the morning of, the operation, the patient had a eucalyptol bath. Looking at these few cases—few, not because he could not largely supplement them, but because they were sufficient for his present purpose—he asks, could such results have been obtained previous to the Listerian teachings of the principles and practice of antiseptic surgery? There can be but one reply—impossible.—*British Medical Journal*, August 12, 1882.

ORIGIN OF THE OLFACTORY TRACT AND STRUCTURE OF THE OLFACTORY LOBES.—SIGNOR GOLGI, in the last part of the *Archives Italiennes de Biologie*, states that he has made a series of sections through the olfactory lobes, with a view of determining the connection of the cells and strands of the olfactory lobes. He finds that there is in man and mammals a superficial layer, continuous with the tractus olfactorius, which gradually becomes thinner posteriorly and stretches towards the gyrus hippocampi; a thicker layer of gray matter, rich in ganglion cells; and a layer of nerve fibres, not very clearly defined from the deeper layer of ganglion cells with which they are connected. He maintains that two kinds of nerve cells exist in the gray substance of the lobi olfactorii—one set the processes of which divide into extremely fine fibrils, and are lost in the delicate plexus of the neuroglia, and a second set the fibres of which, though they divide and subdivide, yet preserve their individuality. The fibres of the tractus olfactorius sometimes curve away from their longitudinal course and enter the superjacent gray matter obliquely. The deeper fasciculi of the lobus olfactorius may be traced to the corona radiata, and some, perhaps, into the anterior commissure. Some of the nerve fibres of the olfactory tract originate in the plexus of fine nerve processes of the lobi olfactorii, but are not directly continuous with the ganglion cells of this region. Other fibres, again, are directly continuous with the processes of the ganglion cells.—*Lancet*, August 12, 1882.

LUXATION OF THE CERVICAL VERTEBRÆ.—At the surgical clinic of PROF. GUSSENBAUER, on July 20th, a patient was presented, who, the day before, had fallen into a ditch, and struck on his head, which was violently flexed on his chest, producing a lateral subluxation of the second, third, and fourth cervical vertebræ. The entire cervical spinal column moved together, on attempts to move the head, causing great pain, while lateral movements of the head were impossible. Examined through the mouth, a marked depression was found opposite the second and third vertebræ. The reduction of the luxation, which is generally very dangerous, on account of the liability of compressing the spinal cord, was accomplished by continued extension of the head, by means of a weight, until the normal position and mobility of the neck were attained. Massage and passive movements, which were first tried, were of no avail.—*All. Wiener Med. Zeit.*, August 1, 1882.

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THE SURGICAL TREATMENT OF PERITYPHLITIS.

Not every case of perityphlitis needs the knife. More than one-half of the cases recover under purely medical treatment. It is nothing rare to see a case with sharp fever, the right leg painful on motion, and possibly drawn up, pain localized usually in the right iliac fossa, a more or less well-defined tumor in the same region, which is tender on pressure, and increases up to a certain size, and then, after a few days, subsides, the case thus terminating by resolution without suppuration.

But, on the other hand, not every case has so happy a termination. A considerable, and, in fact, we might well say, a large number of cases go on sometimes swiftly, at other times slowly but surely, from bad to worse; the tumor increases in size, and finally bursts either externally (strange to say, its least fortunate course), or into some hollow viscus, and the patient recovers after a tedious convalescence, during which he has run the gauntlet of many perils; or more frequently dies, either as a result of exhaustion or peritonitis, or hemorrhage, or some other equally avoidable evil.

Previous to 1867, the treatment of perityphlitis was well-nigh wholly medical. If an unmistakable abscess formed, of course, like any other abscess, it was either opened or more often allowed to discharge spontaneously. Little, if any thing further, was done surgically, although twenty years before Hancock had operated successfully in one case. But in that year Willard Parker established the surgical treatment of the disease, and scarcely any improvement has been made upon the method he then proposed. We call attention to it not to suggest improvements, but to point out the fact

that so simple, so useful, and so successful an operation should be far more frequently resorted to, and to indicate some of the conditions which would make it not only justifiable, but advisable. Happily, it is growing in favor, and many of our readers will be able out of their own experience to confirm our views. In June last, one of the few cases done in this city was reported to the County Medical Society.

The operation proper is not commonly a difficult one. The incision should be usually about three inches in length, parallel to and a little above Poupart's ligament. Dividing successively the skin, superficial fascia, the aponeurosis of the external oblique and the bellies of the internal oblique and the transversalis, the direction of whose fibres is a ready guide in their differentiation, we reach the transversalis fascia. If fluctuation or other undoubted evidence of pus now be found, this fascia should be incised at once. If the case be still doubtful, a hypodermic syringe or the aspirator needle may be inserted at different points to find the pus, and once found, the knife may lay the cavity widely open, or, after a small opening, the dressing forceps may be inserted, opened, and withdrawn, thus tearing a vent, as practised by Buck, and since recommended by Lister in other cases, especially those in which vessels might be injured by the knife. If no evidence of pus be found, then the wound may be packed, and the subsequent treatment be guided by circumstances; usually a few days will release a considerable quantity of pus.

The discharge will vary in amount from a couple of ounces up to even a gallon. It is usually very fetid, and in it may sometimes be discovered the foreign body or fecal concretion which has been the cause of the mischief. In a sac formed only by inflammatory adhesions, and especially if it be recent, it is wise not to do too much fingering. Satisfied with a free exit to the pus, it is best merely to wash out the cavity gently by carbolyzed water; dress with ample absorbent material—preferably the antiseptic, and indeed the whole treatment ought to be such—give the lightest kind of fluid food, and appropriate remedies, and the result in by far the larger part of the cases will be most satisfactory both to the surgeon and the patient. The discharge will be abundant for the first twenty-four hours at least, and during this time the wound should be dressed twice. Of course, thorough drainage should be established either by a single or double rubber tube, but, as Stephen Smith has recently shown, its too long continuance in any wound is hurtful. Hemorrhage is not apt to be severe; in fact, very often not a single artery will require a ligature. The cavity must be made, of course, to heal from the bottom.

When shall such an operation be done is perhaps

the first question to be answered. Shall we wait till a chill, fluctuation, and other evidences of pus are present? If we do, we shall often wait till irreparable injury is done, either by extensive burrowing or by perforation of the bladder, rectum, vagina, or other hollow organ. In some cases it can hardly be said that a well-defined tumor exists, but merely a diffused, poorly limited swelling, with a brawny, hardly doughy, feel, with no fluctuation, and but little œdema, and that, too, long after pus has formed. Yet these cases should be operated on, and almost invariably pus will be evacuated in large quantity. The swelling is not always dull, and at least on superficial percussion may be even tympanitic. In explanation of the foregoing peculiarities we must remember that the pus begins to accumulate usually behind the hollow cæcum; that the wall of the abdomen is separated from the bowel by the peritoneal cavity; and that the abscess, therefore, only compresses the cæcum and affects the abdominal wall secondarily, and after it has reached a certain size.

The earliest operation done has been on the fifth day, but it has also been done successfully after even two years. When the disease has existed for five days or more, as Parker and Burger have shown, the abscess is already a circumscribed one, and diffused peritonitis is then a danger not likely to follow, either spontaneously or as a result of careful operative interference.

The rule for such interference may be stated in a general way as follows: Given a case of perityphlitis which has existed, say for a week or more, no operation should be done as long as the patient is improving, although only gradually, or continues in about the same condition, or until so long a time a time has elapsed as to make it doubtful whether resolution can be expected. *Per contra*, given a similar case of a week's duration or more, with the symptoms we have described, and going from bad to worse, an exploratory operation should be done which will almost certainly lead to the opening of an abscess, although the physical signs of such an abscess may be obscure, or even wanting.

The remote results are usually most favorable, the patient regaining health and strength very rapidly. Troublesome sinuses, however, occasionally remain. Weber reports one case followed by a hernia; and Mason, Partridge, Keyes, and others report cases of recurrence of the disease; the last, indeed, giving the most extraordinary history of subsidence and recurrence of the disease that we know of.

CHINESE MEDICINE.

DR. D. J. MACGOWAN, in his discursive, but highly interesting, "Report on the Health of Wên-chow for the Half-year ending September 30, 1881," gives us some very curious glimpses into Chinese

medical practice, which illustrate the contradictory aspects of the singular civilization of the Flowery Land. On the one hand, we have records of epidemics extending as far back as A.D. 95, and "more than a score of centuries before Hippocrates wrote of 'critical days,'" the "Yellow Emperor," Hwangti, discoursed learnedly on the same subject; while Dr. Macgowan assures us that the medical literature of China displays great acumen and powers of observation. On the other hand, nothing can well exceed the superstition and fetishism which prevail in actual practice among the people. Pestilence is universally regarded as the work of special demons, not only by the uneducated but by the literati and governing classes. This belief is of old standing, for it is recorded that in 541 A.D., the Emperor Kautsu, on the appearance in the sky of an apparition of "five mighty ones," was told that they were Heaven-sent demons, agents of the five epidemics (of spring, summer, autumn, winter, and pestilences in general), robed respectively in green, white, red, black, and yellow, and each bearing a utensil, such as a hammer, ladle, sword, etc. A great epidemic followed throughout the Empire, in the hope of assuaging which, Kautsu erected a temple and offered sacrifices to the demons, on each of whom he conferred the military title of general. Efforts are still made to propitiate these demons by processions in which they are borne magnificently arrayed, and earnest devotees are found to offer the sacrifice of suffering by bearing for weary miles pots of incense suspended by hooks inserted in the flesh of the arm, which is kept extended by an iron rod passing from the hip to the hand.

Much of this is probably the result of the corruptions of Buddhism and Taoism, for Confucianism, the religion of the governing classes, imparts teachings of a much higher order. Enlightened officials are therefore sometimes found who take a more sensible view of the case, such as the Governor of Wên-chow, in the sixteenth century, whose province for several decades had been ravaged by an annual epidemic, until the inhabitants feared to venture out at night lest they should encounter the demon personally. He finally, in 1579, assembled the people and gave them a lecture on sanitary matters, inculcating a reformation in manners, food, and mode of life; and though he permitted the erection of a temple to the five demons, which the zeal of the people accomplished within a month, and which is still standing, his enforcement of the proposed reforms shortly afterwards put an end to the visitation. Even more rationalistic was Chang Tzüchi, Governor of Changchau, when it was depopulated by a pestilence in 1295. He established a dispensary for the gratuitous distribution of medicines, but

found no custom, as the people preferred making offerings in the Temple of the Demons of Pestilence, purchasing charms and amulets of the bonzes, and employing them as exorcists. Whereupon Chang Tzüchi fuddled his soldiery, and before they were sober enough to recognize the sacrilege, he caused them to level the temple to the earth, and he finished the matter by scourging the priests and setting them adrift. But, as Dr. Macgowan remarks, "unfortunately rulers of that stamp have neither successors nor imitators."

Yet Confucianism also lends itself to the propagation of these superstitions, through its admission of ancestor-worship as the only form of religious service. The five demons whom Kautsu promoted to the rank of general seem to have been regarded as the spirits of departed men, and the medical profession in China habitually resort for assistance to the deified spirits of renowned practitioners of the past, who have temples dedicated to them, and who are dignified with the title of Yo Wang, or Medicine Princes. The earliest of these is Pien Ch'iao, who flourished in the fifth century B. C. He was originally an innkeeper, who had the luck to encounter a spirit, from whom he received a drug which, taken daily for a month, so spiritualized him that he was able to see through stone walls, and thus became competent to form a correct diagnosis of the most recondite disorders of the viscera, leading to astonishing cures. It is melancholy to have to add that he was assassinated by the court physician of the Prince of Tsin, whose jealousy he had aroused by curing the prime minister after the physician had abandoned the case as hopeless. Professional heart-burnings to-day are, doubtless, as bitter as they were then, but fortunately they are not manifested in such vigorous style.

We shall hope to hear more from Dr. Macgowan, who is evidently a zealous cultivator of the wide and curious field of observation that lies before him.

THE SUBCUTANEOUS INJECTION OF ETHER.

It should be more generally known that ether injected subcutaneously has a powerful stimulant effect; and is remarkably efficacious in cases of extreme depression of the powers of life. It has long been used to a limited extent in such cases, but increasing experience has enlarged the domain of its application. In adynamic pneumonia, in fevers when failure of the vital powers is threatened, in the puerperal state, in cases of thrombosis of important vessels, the injection of ether has been lately used with singular benefit. Besides, as a stimulant in conditions of depression, it has important applications as a hypnotic and local anodyne. In cerebral excitement and wakefulness, accompanied by depression of the arterial

circulation, it is most useful. In the more chronic cases of superficial neuralgia, as sciatica, lumbago, intercostal pain, zoster, etc., ether injected in the neighborhood of the affected nerves often gives surprising relief.

There are contra-indications to its use. It is not proper in the cases of cardiac depression due to chloroform or ether narcosis, and yet it has, in the confusion incident to such an event, been freely injected on the cessation of the cardiac or respiratory movements. Under similar circumstances, alcohol has also been freely injected subcutaneously, but this practice is equally improper—and both for the obvious reasons that these are synergistic agents. Ether, subcutaneously, is also not a suitable remedy when there is arterial excitement with power.

The technical details are simple. Ether must be injected with a glass or metallic syringe. Rubber and celluloid are damaged by it. As ether dissolves the oil with which the piston is lubricated, the syringe should always be put in order after ether has been injected. It is a useful precaution, also, to see that no particles of dirt or of leather are taken up with the fat. Vaseline appears to be the safest lubricant under these circumstances. From ten to sixty minims is the dose—fifteen minims being the quantity most frequently injected. Some smarting attends the operation, but if the operator is careful in withdrawing the needle to press on the orifice tightly, to prevent the ether escaping, much smarting will be thus obviated. A puffy swelling is caused by the vaporization of the ether, but this presently subsides, and only rarely is an indurated knot formed. An anæsthetic and analgesic area of limited extent surrounds the puncture.

The ether used should be of good quality—as good, indeed, as that now employed for inhalation. The number of times injected will depend on the character of the case, but there appears to be no reason why it may not be injected frequently. Three or four times a day has been the rate in cases of adynamic pneumonia. When sudden, extreme depression of the heart is to be overcome, ten or twenty minims can be injected every five minutes, until some result is reached.

The systemic effect is that of a stimulant; the action of the heart is increased, the surface grows warm, and the nerve centres and the organs of the body in general functionate more quickly and powerfully. The curative results of the subcutaneous use of ether are not only different in degree, but in kind, from the stomachal administration of the same agent. This fact must be recognized to obtain a correct notion of the utility of this practice.

HYDROPHOBIA.

THE recent presentation to the French Academy of Medicine of a case of so-called hydrophobia, cured by pilocarpine, and the opinion held in regard to it by M. Bouley, probably the best informed person upon this subject in France, or anywhere, prompt us to make some remarks upon this exceedingly obscure disorder.

M. Bouley did not believe the case referred to to be one of hydrophobia. For such an opinion two good reasons are apparent: first, hydrophobia cannot be cured by pilocarpine, or any known drug; and, second, the symptoms of this case were not, as the reporter, Dr. Denis-Dumont, supposed, pathognomonic of hydrophobia.

A man, a woman, and a girl were bitten by the same dog on the same day. The woman died hydrophobic (?) in thirty-six days. The girl has not suffered. The man, on hearing of the woman's death, became excited, took to the fields, ran about wildly, and tried to bite everything that came in his way. On being taken to the hospital at Caen, he showed great dread of fluids, and spasm of the throat on attempting to drink.

These are well known popular symptoms of hydrophobia; but, as is common in imitative diseases, the picture is too strongly drawn—the *idea* is carried out, but the typical course is left behind. Horror of fluids is not a pathognomonic symptom of hydrophobia, spasm of the larynx or pharynx usually occurs, but running wild is almost unknown, and attempts at biting are almost if not quite as rare. Actual biting has, we think, never taken place.

The acts enumerated are not evidences of hydrophobia, but of an excited and perverted nervous system. This is the more obvious in cases like that before us, where the attack was precipitated (upon one who, at the time of the bite, had been sufficiently impressed to cauterize the wound with nitric acid) by hearing that another person, bitten by the same dog, had died with symptoms of hydrophobia.

The fact is, there is no subject in the whole field of medical investigation which is so strange and mysterious as hydrophobia. It would be idle to assert, in the face of recent experiments with the saliva of healthy human beings, that the inoculation of the saliva of an enraged or diseased dog may not cause sickness or death to other animals, of various species. But the plain truth is, that no more is certainly known to-day as to the specific nature of the virus of rabies and hydrophobia, than was known or imagined by the ancients. Those who have given the greatest amount of time and labor to the study of this disorder are the most cautious in pronouncing upon its appearance—the last to claim anything for its treatment.

There are those who boldly say that it is a pure neurosis. Bosquillon, in the beginning of this century, stood up alone against those who considered it to be due to a specific virus, and Lauder Lindsay and Tuke have recently shown afresh that many cases may be attributed solely to the effect of the imagination, while R. White actually inoculated himself twice from rabid dogs, to prove his opinion that there was nothing specific in the virus. On the other hand, Hertwig, Virchow, Bollinger and others in Germany, and Doleris, Bouley, Colin and others in France, have experimented and written to prove the contrary opinion. Bollinger even goes so far as to intimate that the disease may be communicated through the intervention of fleas and lice!

Thus we see that the most opposite views have been held in regard to the nature of hydrophobia. There is no authority so undisputed that it may be appealed to to decide what it actually is. Consequently there is no question which demands for its solution more skill, acumen, thoroughness, and conscientiousness, than that which presents itself when one is called upon to give a name to the congeries of symptoms sometimes seen after bites from dogs, and usually followed by death.

Only by the exercise of the greatest caution can any one hope to avoid stumbling in the darkness which invests this subject. No hasty adoption of the diagnosis of hydrophobia will do, no implicit acceptance of the stories told by patients or friends, no easy belief that one knows what are the symptoms or what should be the treatment of the disorder, if this knowledge has been gained from the ordinary text-books. If ever the mists in which this subject is now shrouded are to be dispelled, it will be by the converging light of many histories of cases, observed with the most scrupulous and intelligent care, and sifted with the most pitiless sifting.

And it should never be forgotten that the more eminent the position of one who speaks on any subject, the more injury is done to the cause of science if he makes a mistake.

"PLANTS WITHOUT EARTH."

UNDER the above caption, Mr. R. Heath, in *Good Words*, gives an account of the researches of Alfred Dumesnil, the "gardener of Vascoenil," as to the possibility of cultivating plants without earth. He has discovered what he calls a "fertilizing moss," in which he wraps up their roots, and it affords nourishment to all kinds of vegetable life, and for an indefinite time. His experiments have been continued for two winters, during which time his house has been a blooming parterre, while nature without was in her shroud of snow. The process

has been patented in England, and a depot for the sale of the fertilizing moss will shortly be opened.

To chronic invalids this will be welcome intelligence, as a means of beautifying their rooms and of varying the monotony of their lives, while it will afford a ready means, also, of trying the effect of plant life upon pulmonary diseases, to which especial attention has been called by Dr. J. M. Anders. It is said, also, that Dumesnil has even succeeded with the *eucalyptus globulus*, and if this be so, we may find a new means of combating malaria even in our very homes.

In the July number of the same journal, M. Dumesnil gives minute directions as to the method of procedure. He also states that strawberries may be plucked from the vines in the midst of the table, and even dwarf fruit-trees may be similarly utilized.

RE-VACCINATION.

THE value of re-vaccination has lately had strong evidence in its favor on comparing the results of differing practice in the English postal and telegraph services. Exposure is about alike in the two departments, yet the results have been startlingly different. In the postal department between ten and eleven thousand persons are employed permanently, all of whom must be re-vaccinated on admission, unless it has been done within seven years. Among all of these the last returns give but 10 cases, chiefly of varioloid, and not one fatal case.

In the telegraph service, there are but 1500 persons employed, and re-vaccination is not insisted upon. Among these occurred twelve cases, eight of them among persons not having been re-vaccinated, and one died.

REVIEWS.

PATHOLOGIE UND THERAPIE DER RACHITIS. Von DR. LUDWIG FÜRTH, Dozent an der Universität, etc. Wiener Klinik, V. und VI. Heft, Mai-Juni, 1882.

PATHOLOGY AND THERAPEUTICS OF RACHITIS. By DR. LUDWIG FÜRTH, etc.

THIS work is written upon a subject of which there are so many exemplifications in Vienna that the name, "Englische Krankheit," by which it is very often called, sounds like a fine irony.

"Every clinical description of rachitis," Dr Fürth says, "is incomplete, and, if it be held up against the picture of some case that has fallen under the observation of the reader, may but imperfectly cover it. It can only present isolated types, and indeed only those of most frequent occurrence; while again and again rachitis appears in a form possessing only isolated features of these isolated types, or even in one which does not exhibit these at all."

Then the learner may well be on his guard against error, and, bear in mind that, while continued digestive disorders are not necessarily the precursors of rickets, yet they must always be regarded with suspicion, especially if they be accompanied by free sweating on breast and head, even in apyretic intervals. Then, if

the case be one of rachitis, what follows may be observed: "The child, which has already begun to walk, which so far has shown little sensitiveness under the ungentle treatment of its care-taker, now cries out on the most careful handling, the lightest grasping of the chest; it experiences pain on being set down, or having its hands taken hold of. The use of the extremities appears no longer as free as before, so that one of the earliest changes in the conduct of the child is its bad attitude; for standing erect, walking, and sitting seem uncertain. The child is anxious in its movements, it seeks all sorts of supports, walks as little as possible, preferably on hands and feet at once, appears unusually dull, and avoids every unnecessary movement; it bends and stoops to pick up any thing from the ground with great constraint and effort, in doing which it helps itself by sitting quite down on the ground and reaching after the object with outstretched hands. The child, heretofore bright, active, and never still, likes to fix itself comfortably and long in one place, because clambering up and down from the chair is an occasion of special toil and hardship. In order to avoid this, it must make peculiar movements, which are pointed out as bad habits. All these are circumstances which finally bring those about the child almost to believe that disturbances of unknown character in the locomotive apparatus of the child must be present or coming on."

But the finely drawn picture of the appearance of a rachitic child is too comprehensive to be given in its entirety; we can, in leaving it, only allude to the details of digestive disturbances, sweating, emaciation, paleness, and finally the characteristic deformity of the bones.

The author discusses the question of congenital rachitis, and doubts the accuracy of the diagnosis in so-called cases. The same doubt is expressed in regard to attacks said to originate much after the end of the third year.

Acute rachitis, an extremely rare form, he holds to have little in common with real rachitis, except the name. As Fürth has said, he believes there may be an acute prodromal stage of a genuine rachitis, but one must not confound with this non-rachitic disorders of nutrition, accompanied, though they may be, with pain and hypertrophy of the bones.

The etiology of rachitis, the author says, is far from exact, and there is no children's disease for which a precise explanation is so utterly wanting. This may be true in a sense, but it is not absolutely true. The author's own words and universal observation may be set against this assertion. The occurrence of rachitis can always be traced to imperfect nutrition, dependent upon bad hygienic surroundings and insufficient or improper food, or upon a depraved constitution incapable of taking advantage of the best surroundings and food, or upon both. Thus, in Vienna, as elsewhere, the greatest ravages of rachitis are among the poor bottled children, deprived of their natural and proper sustenance, and often supplied with the most improper food.

Dr. Fürth denies absolutely the heredity of rachitis—miserable constitutions are often enough inherited, but not rachitis. Indeed, healthy parents may have rickety children, and children of parents who have had severe rachitis may escape it.

He devotes considerable space to refuting the surprising claim of Parrot, that all cases of rachitis can be traced to hereditary syphilis, a claim which has found few acceptors. That children with syphilitic parents are sometimes rachitic, no one can deny, but that syphilis is always, or even often, the cause of rachitis any one may deny. The logical method by which Parrot arrived at his conclusion is as follows: many

children with rachitis have manifestations like those of hereditary syphilis; they are those of hereditary syphilis; rachitis is hereditary syphilis. A neat and conclusive style of argument. Unfortunately, however, for Parrot, not only are there those who see—as did the Pope in Father Tom's argument that *black* was *white*—a flaw in such logic, but as Dr. Fürth says, "the whole symptomatology of rachitis presents, in its entire course, not the remotest similarity to that of acquired or hereditary syphilis of children." Happily the habit of promiscuously attributing to syphilis otherwise inexplicable phenomena, is not as general as it once was. But it is still widespread enough to call for renewed warning and reprobation, whenever it shows itself.

The next theory Dr. Fürth refers to is that advanced by Oppenheimer, of Heidelberg, who considers rachitis to be of miasmatic origin. Of this the author speaks with a consideration which looks like partiality when we endeavor to find in Oppenheimer's argument the reason for his belief.

As to the essential nature of rachitis we find a most interesting section of Dr. Fürth's paper. Experiments as to the influence of an insufficient supply of certain elements of food, especially of lime salts and phosphorus, are quoted. These experiments are contradictory and lead the author to the conclusion that a genuine rachitis cannot be excited by artificial feeding. The only theory in regard to the immediate cause of rachitis which, in his opinion, continues to find much acceptance is the "acid-theory;" and this, he says, is losing ground of late. This view is thus stated by Seemann: "The impoverishment in lime-salts of rachitic bones is the consequence of a specific digestive disorder, consisting in a deficient production of hydrochloric acid in the stomach. This deficiency in hydrochloric acid is a consequence of the lack of chlorides, which can be procured by the free use of salts of potash." The fact is that no analysis of food, or of excreta, has furnished good reason for attributing rachitis, or freedom from it, to the influence of any one ingredient. It can be charged to poor food or poor assimilation—more precise we cannot yet be.

Of the pathological anatomy of rachitis, nothing new is stated by the author, but his description is full, scholarly and exact. A distinction is drawn between fracture and "infraction," in the latter of which only part of the circumference of a bone is broken, and that usually the convex side of distorted bones.

Of the symptomatology he says, "Craniotabes is a special symptom of rachitis in the first quarter or half year of childhood, appearing in no other disease. It is one of the first, if not almost always the very first, symptom of this disorder. Craniotabes may remain the sole symptom of rachitis, or be the precursor of others." He says that the apparent enlargement of the cranium is not actual, but relative, and depends upon the want of development of the facial bones—a statement, the absoluteness of which might be questioned. He quotes Fisher, of Boston, as having, in 1833, first called attention to the systolic head murmur, heard over the fontanelle, in rachitic children. This is, as the author says, no longer considered pathognomonic.

Of nervous phenomena, he lays great stress upon the occurrence of spasm of the glottis, which, he says, occurs in children under one year, only when they are rachitic. The older ideas as to the prejudicial influence of teething upon rachitis, he inverts into a prejudicial influence of rachitis upon teething.

In speaking of the bony changes, the author makes a mistake, we think, in passing somewhat hurriedly over those of the pelvis, on the plea that they are in the province of the obstetrician. The order of appearance of changes in the bones he puts thus: first, the

protrusion of the costal cartilages or craniotabes, then swelling of the epiphyses of the radii, and afterward other changes in irregular order.

The prognosis of rachitis depends, of course, upon the condition and surroundings of a child, and, as the author says, must be the more uncertain, the younger the disease is—that is, until something can be learned by observing its progress. The first sign of improvement is improved digestion.

In the important matter of treatment, Dr. Fürth speaks clearly and positively. Vegetable food is to be avoided as much as possible—a view which is sadly confirmed by the fate of many children in Vienna. Cow's milk he holds to be the very best substitute for human. The most important difference between these two kinds is in chemical reaction, and the usual acidity of cow's milk must always be corrected. The fact that the casein of cow's milk coagulates in much larger masses than that from human milk, is mentioned; but no suggestion made as to how this may be obviated. The addition of barley water, so common in this country, is not alluded to. Dilution is spoken of, and the addition of sugar to approximate the proportion of this constituent in human milk.

As to medicament, great stress is laid upon the treatment of complications. Spasm of the larynx cannot, the author says, be treated as Flesch recommends, by letting the child lie quiet in bed. Something must be done for the credit of the physician and the comfort of the patients. Chloroform and electricity are useless or inapplicable; long-continued administration of bromide of potassium is the most useful plan to pursue, according to his experience.

Cod-liver oil is the best systemic remedy for rachitis; its only contraindication is severe diarrhoea or gastric catarrh. It should never be given on an empty stomach, and the author disguises its taste with syrup of orange, or anise or fennel. He considers the brown, unclarified cod-liver oil as the most suitable. He states particularly that the benefit derived from cod-liver oil is not due to its contained iodine.

Phosphate of lime holds no high place in the author's estimation. Phosphorus, he says, "has entirely disappeared from the practice of our times—the present Austrian Pharmacopœia no longer contains it." Iron, on the contrary, he thinks a valuable tonic. Warm and medicated baths are also useful, especially salt baths. Simple change of air, he says, sometimes produces remarkable improvement in rachitic children.

The last part of the treatment of rachitis, which the author considers, is the orthopædic and surgical. As to the former, he suggests common sense avoidance of whatever is calculated to cause or increase deformity, and speaks very approvingly of Sayre's plaster jacket. Surgical interference must never, he sensibly remarks, be dissociated from proper medicinal and dietetic treatment.

So much in outline of the author's views. Of criticism, there is little to be made. So thoroughly and so admirably has he presented the subject that we rise from our examination of his work with a sense of its value, which brings a regret that it is not accessible to readers unfamiliar with the language in which it is written.

One little drawback to its mechanical construction is the fact that, like not a few other German monographs, it is not adequately divided into chapters and sections. If this were done, and done judiciously, it would be a great help to the reader, both in his first study and in subsequent reference to it.

CORRESPONDENCE.

BRITISH MEDICAL ASSOCIATION—JUBILEE MEETING AT WORCESTER.

WORCESTER, August 12, 1882.

IN continuation of my last letter, I must take up my account of the proceedings on Thursday, August 10. At the general meeting held that evening, Prof. Stokes, of Dublin, gave a very earnest and eloquent *Address in Surgery*. He said that the Association, as it had its birth in the "Faithful City," so it had proved faithful in many good and noble ways—faithful in removing professional jealousies and softening asperities—faithful in protecting with its broad and strong shield those who had been cruelly and unjustly attacked—faithful in its efforts to raise the social status of the profession—faithful in its attempts to extricate public opinion from the quagmires of sentimentalism and folly—faithful in aiding and encouraging the scientific vanguard of the profession. The list of advances in surgery during the last half century was a goodly one. Among these were the abandonment of an indiscriminate blood-letting in almost every form of acute disease, of a reckless use of mercury in the treatment of certain diseases, and of setons and moxæ in hopelessly irremediable articular and other diseases. Having enumerated a goodly list of the modern improvements in surgical treatment, he singled out, as topics which far surpassed in importance all others, the three "giant strides that the past half century has witnessed,"—namely, the discovery and application of anæsthetics, the restoration of diseased or injured bones and joints necessitating resection, and "the enunciation of the principle and establishment of the practice by Pasteur and Lister of antisepticism in the treatment of wounds." Such advances may well make us feel a pardonable pride in British surgery, and give confidence in the coming triumphs of our art. As to anæsthetics, he adverted to the peril which must necessarily attend their administration, and the need for caution and the adoption of such a rule as that formulated by Mr. Hutchinson in reference to the use of chloroform in cases below six and above sixty years of age. He expressed a personal preference for ether, as economizing time, as being safer, and, as a rule, being followed by less sickness and a slower return to sensibility. The best methods for administering it were those in which the air is re-breathed by the patient, and experience had not confirmed the *a priori* belief that this admixture of ether vapor and carbonic acid gas introduced an additional element of danger. After briefly enumerating the advantages of anæsthetics, and referring to Morton's priority in their application to surgical practice, he passed to the subject of antiseptic surgery, in support of which he spoke in terms of considerable force and eloquence. Naturally he referred to the address delivered by Mr. Savory at the Association meeting at Cork, in 1879, where the subject had been adversely handled, and declared that when "the address is stripped of all its brilliant eloquence and rhetorical decoration," it reveals the admission of the germ theory of putrefaction, and the fact that the method of dressing employed by Mr. Savory is essentially antiseptic. Mr. Lister's recent utterances upon the value of the carbolic spray had been much misunderstood; for he did not abandon the antiseptic principles, but looked forward to obtaining more perfect means than the carbolic spray afforded. The various views of the nature of inflammation propounded by Burdon Sanderson, Ogston, and Hueter, as to whether the infective properties of inflammatory products are or are not primarily dependent on the contact of atmospheric organisms, were shown to be equally consonant with the prophylactic

principle of antiseptic surgery. The weak point of the "persistent and obstinate opposition" to Listerism is the general admission of the truth of the germ theory of putrefaction; whilst Mr. Lawson Tait's "dead tissue factor" was regarded as a superfluity. "Those who advocate and practise what they are pleased to term a "modified" antiseptic system, attempt, in fact, in a roundabout, clumsy, inefficient way, to do precisely what those who practise Listerism achieve by means which are the outcome of accurate scientific research. The aim in both cases is to neutralize or destroy the agencies which predispose to and produce the *materies septica*; in the one instance by numerous uncertain and often inefficient methods, and in the other by the unerring artillery of chemical agency." Mr. Stokes disposed of the taunt that Listerism lacked originality by mentioning what he had himself seen of Maisonneuve's practice. He considered that ovariectomy was not the best test of the efficacy of the method; one of the best tests of its value is resection of the knee-joint; and he illustrated this from his own experience. He also related other remarkable instances of "antiseptic triumphs," and asked whether such results could have been obtained previous to Listerian teachings. There can be but one reply—impossible. As to its hygienic effects, he mentioned the change that had been wrought in mortality from erysipelas, pyæmia, and hospital gangrene in the hospital to which he is attached—when its present condition is contrasted with that which prevailed during his studentship, an experience which has been so widely repeated abroad. Mr. Stokes then defended Professor Lister and his followers for not having more recourse to statistics in demonstrating the superiority of antiseptic methods, and asked why Mr. Savory made no mention of ovariectomy when he gave the statistics of operations at St. Bartholomew's Hospital. Without himself regarding statistics with the reverential awe of some, he mentioned that at the Richmond Surgical Hospital in 600 operations performed by himself and colleagues during the past three years, the mortality was 3.6 per cent.; "and there was not a single case in which Listerism was accurately employed that was followed by any infectious disease." He enumerated some of the directions in which owing to antiseptics the field of surgery had been widened, and severely commented on the line taken by those who wilfully refuse to acknowledge its benefits, and concluded his remarks on this head as follows: "In the interest and for the credit of British surgery it is time so unrighteous a warfare should cease. It is time that the irritating dust of an unreasoning prejudice should be swept away. It is time that one of the greatest discoveries and boons to surgery this century has produced should be universally recognized as such. It is time that its discoverer and exponent should be acknowledged as one of whom it may well be said—

"With genius Nature joins in everlasting covenant still,
The promises of one, the other fails not to fulfil."

In the third part of his address Mr. Stokes dealt with the method adopted for bringing about a regeneration of bones and joints necessitating resection on account of injury or disease, with which the names of Syme, Langenbeck, and Ollier must for ever be associated. He described the conditions under which these operations were most successful, and referred to the great advance made by the introduction of bone-transplantation by Dr. McEwen of Glasgow. Then, speaking more particularly of bone-resection, he urged its performance before any profound organic changes take place. A reference to amputation, and especially to the single flap operation of the late Mr. Carden, of Worcester, closed this survey of surgery, and the rest of the address was occupied by an eloquent vindication of experimental research, and a protest against the increas-

ing agitation that is now maintained in opposition to it. He concluded: "I have mentioned many achievements in surgery the past half century has witnessed. Fifty years hence this great Association will, I hope, again meet here to celebrate its centenary; and my successor will, I trust, with greater ability and eloquence than I can command, tell of as great or greater triumphs than I have done. To enable him to do so we can all aid, some powerfully, others feebly; but still every unit in this great brotherhood can assist; and it should be our ambition as well as our prayer, that when the hour arrives for us to cease from our work, we may all feel, on looking back on our lives, that we have done something to that end. Something—be it great or small—in the interests of our common humanity, in the interests of our loved country, and of a pure devotion to truth, to render the science to which we have devoted our lives nobler and fairer than before."

At the close of the Address on Surgery, the Stewart Prize of 50 guineas was presented to Dr. Vandyke Carter, for his researches on spirillum fever.

The Annual Dinner of the Association, attended by about two hundred members, was held in the evening.

The concluding General Meeting was held next morning, when, in addition to the various complimentary votes, there was a very lively discussion on the question of the *Notification of Infectious Diseases*. This had already been debated in the Section of Public Medicine, but it was determined to take a vote at the general meeting. There is a scheme on foot to make the notification of every case of infectious disease, to the local sanitary authority, compulsory. It has been suggested to throw the onus, and, I may add, odium, of carrying out this scheme on the doctor in attendance. This was warmly debated, and a very general expression of opinion in favor of the general scheme, but making the householder the person responsible for giving the notice, was elicited. I am sure your readers will fully appreciate the objections that may be fairly urged to the original proposition.

The Middlemore Prize of 60 guineas was presented to Mr. Adams Frost, for his *Researches in Ophthalmic Surgery*.

Reports of various committees were received. This brought the work of the meeting to a close, and excursions and entertainments became the order of the day. Many visited the famed brine baths of Droitwich. In the afternoon the whole Association was received by Earl and Countess Beauchamp, at their seat, Madresfield Court, Great Malvern.

In the evening, the President of the Association, Wm. Hastings, M.P., the son of the founder of the Association, gave a musical *soirée* to the Association in the Shire Hall. Saturday was devoted to excursions to Malvern, Hereford, the Wye, Stratford-on-Avon, and other places of interest in the neighborhood. The meeting was a very pleasant one, but perhaps hardly rose to the occasion of a jubilee. There was a conspicuous absence of London members, probably owing to the exhausting effects of the Congress of last year.

At the second session of the SURGICAL SECTION two important subjects were the main topics of discussion—the surgery of arteries and abdominal surgery.

Mr. Bryant related a case of *Double Popliteal Aneurism*, of which one was cured by pressure, and the other by Speir's artery constrictor with antiseptic (not aseptic) precautions.

Mr. Thomson related the history of his case of *Ligature of the Innominate Artery for Subclavian Aneurism*, and showed the specimen. Subsequent speakers were quite agreed that the fatal result was not dependent upon the ligature of the artery, but was due to ulceration of the drainage-tube sinus, probably opening up the vertebral artery; the ligature (ox aorta) had acted perfectly.

The experience of this case was held to be encouraging, but it left it an open question whether in another case it would not be well to ligature the vertebral artery at the same time as the innominate, even if not the common carotid artery as well.

Mr. A. H. Dolman reported a case of *Traumatic Axillary Aneurism* successfully treated by ligature of the subclavian artery. So much difficulty was met with in getting the thread around the artery (the left), that the clavicle was divided to expose the vessel.

Mr. Barwell showed the Aneurism Needle he had had made for cases of this kind, and expressed his belief that had it been employed division of the bone would have been unnecessary.

Mr. Bartleet read a paper on five cases of *Ligature of Large Arteries*. One was a case of femoral aneurism, for which he tied the common femoral trunk with chromic catgut; the wound did not remain aseptic, and secondary hemorrhage came on. The wound was then opened up, when it was found that the artery had separated one-tenth of an inch above the ligature. The two ends of the vessel were then tied with a hempen thread. Again there was repeated secondary hemorrhage, for which the external iliac artery was ligatured with whipcord, with a final successful result. This case presented many features of great interest from a practical point of view, and would in itself have afforded ample material for a good discussion.

Mr. Bennett May related a case of *Ligature of the External Iliac Artery* and discussed the best material for ligatures, and stated that there was more difficulty in getting primary union of a wound when chromic catgut was used than when carbolic gut was employed, and he expressed his preference for common catgut soaked for a long while in carbolic oil.

Mr. Robson showed an *apparatus for obtaining an antiseptic atmosphere to replace the carbolic acid spray in surgical operations*. Asserting that while the carbolic acid spray was aseptic, it was not antiseptic, and was also harmful, Mr. Robson advocated the value of an antiseptic, dry, non-poisonous atmosphere. This he obtains by pumping air through cotton-wool to purify it from all suspended impurities, and then through eucalyptus oil. To show the antiseptic value of an atmosphere of this kind, he had taken several large, wide-mouthed glass jars and poured a little of this oil into each, and had then suspended jars of sterilized hay infusion in them, and had removed their cotton caps for various periods, and in every instance, except one, bacteria had not subsequently developed in the infusion. He had also used it for surgical purposes, and Mr. Spencer Wells had used it during the excision of a mamma, and had expressed himself pleased with it.

Mr. George Elder related a successful case of *Nephrotomy and Nephrectomy* for scrofulous pyelitis.

Mr. Lawson Tait showed a girl from whom he had excised a kidney through the linea alba, and he also showed the kidney, which was sacculated, and contained a large calculus.

Dr. Cullingworth related a case of *Nephrectomy for Hydronephrosis* by abdominal section, in which the patient died from shock twelve hours after the operation; and in reference to this case Mr. Tait remarked that he should never attempt nephrectomy for renal cysts, as the operation of incising and draining these cysts, proved so successful in his hands.

Mr. Lawson Tait recorded a third successful case of *Cholecystotomy*, and showed a large number of gallstones he had removed from the gall-bladder. The gall-bladder formed a prominent abdominal tumor, and it was an interesting feature of the case that, although the cystic duct was completely obstructed, there had not at any time been jaundice. He opened

the gall-bladder, and stitched the edges of the wound in it to the abdominal incision, and extracted a large number of stones. The discharge had continued mucous until that week, when bile had made its appearance, showing that the duct had become patent again. Mr. Tait therefore intended to freshen the wound, and close the sinus.

Mr. Lawson Tait then read a paper on *100 Consecutive Cases of Ovariectomy* performed during the last thirteen or fourteen months, and in which he had not used any kind of antiseptic measure. Of these three patients died, one from choking during vomiting, and two from venous thrombosis starting at the pedicle and spreading quite up to the heart. Six of the patients were pregnant at the time of operation, one in addition had acute peritonitis, one of them miscarried, all got well, and five were delivered of living children at term. Four patients had acute peritonitis at the time of operation, and all recovered. In two the tumor was solid fibroma of the left ovary, in ninety-eight it was cystoma, of these eleven were parovarian cysts, sixty were cysts of one ovary only, and among these were three deaths, and twenty-seven were cysts of both ovaries. In fifty-three cases there were serious adhesions, but he had not found that this factor in any way added to the mortality. Of the three fatal cases there were no adhesions in two, and slight parietal adhesions in the third. In seventeen cases the tumor was sessile. All these cases were dressed with dry absorbent cotton-wool; in about one-twentieth of the cases a part of the wound opened, and then it was dressed with zinc ointment or red lotion. Mr. Tait attributed his improved mortality: (1) To the total abandonment of Mr. Spencer Wells' clamp; (2) to the thorough cleansing of the peritoneum, as recommended by Keith; (3) to the draining of the peritoneum, as recommended by Keith; (4) to increased personal experience; (5) to the diminished number of cases which had been previously tapped; those (two) of his patients who had died from thrombosis had been tapped, one sixteen and the other thirty times. He believed that if tapping was never adopted there would be no mortality except from tetanus and similar outstanding risks; (6) the complete abandonment of antiseptic treatment; (7) the establishment of hospital discipline and hygiene; this he deemed of so much importance that in only exceptional circumstances would he consent to operate in private houses.

Dr. Ward Cousins said that one danger of tapping was rotation of the pedicle on itself.

Mr. Coates (Salisbury) said that it was very difficult to harmonize Mr. Tait's statements with those of Dr. Stokes earlier in the day in reference to *antiseptics*. But his experience in general surgery was that while before his adoption of the Listerian treatment he did not obtain primary union of wounds in one per cent. of his cases, since that adoption he obtained it in every case. He incidentally mentioned a case of a very large splenic tumor, in which he was urgently requested to do, at any rate, an exploratory operation. On opening the belly and passing in his hand he found a large number of soft very vascular adhesions between the tumor and the abdominal wall, in tearing through which there was very free hemorrhage; when this had ceased he closed the wound. The patient recovered, and from that time the tumor rapidly shrank in size.

Mr. Thomson referred to the great diminution in the mortality of his cases that Mr. Tait observed when he first adopted the antiseptic treatment, and maintained that the results of general surgery abundantly proved the value of this treatment.

Dr. Bantock, in opposition to Mr. Tait, maintained that adhesions of ovarian tumors to intestine and pel-

vic organs are serious complications of ovariectomy. He had given up antiseptics, and he had not had more septicæmia than other operators who had used it, and he asserted that Listerism had not freed us from septicæmia.

Dr. Sutton (Pittsburg) had spent a considerable period in studying European surgery, and he stated that in Berlin, Vienna, Halle, Kiel, and Leipsig he found antiseptics everywhere, and such results that on coming to England he dared not have opened the abdomen without employing antiseptics; but then he went to see Keith's practice, and his views were changed; for Dr. Keith and his son (who had done five cases) had had a run of fifty cases of ovariectomy with only one death; and he had Dr. Keith's authority for stating that he had never used the carbolic spray stronger than was recommended by Prof. Lister. He had also seen Mr. Tait's practice for three or four weeks, and he had been very careful to watch his practice closely; for he had been told that he was a man who did not speak the truth; but he had only seen one of his wounds in which there was a drop of pus—already mentioned by Mr. Tait. In America antiseptic surgery had many friends in the East, but had not made much headway out West; and since the International Congress all American surgeons were waiting to see what the English surgeons would make of this question.

Dr. Ed. Taylor, who was for some years Mr. Spence's assistant, said that the question was one of careless surgery *versus* first-rate surgery. Listerism was but a cover for careless surgery, the results of which had been equalled by Mr. Spence's first-rate surgery.

Mr. Tait, in reply, said that the unfair treatment he had received in London had reached such a point that he had had to threaten one gentleman with an action for libel. He advocated placing the operation of ovariectomy in the hands of a few surgeons only. In reference to the question of antiseptic surgery, he stated that he found one great argument against it in the constant changes which were being introduced into it. One preparation was always being abandoned in favor of another; the original catgut ligature was replaced by the chromic gut; and a new method of preparing the latter was recently introduced. If the practice were as perfect as had been represented, it would not need such constant modifications.

The last meeting of the section was mainly taken up with a discussion on *bone-setting*, which was opened by Mr. Howard Marsh, who referred to the cases benefited by "bone-setters;" and urged that these should be taken in hand with more boldness by surgeons, while many cases of stiff joints should be prevented by more judicious treatment.

Mr. W. Adams followed with a paper on the same subject, in which he attempted to classify the cases which would be benefited by forcible movement; and he urged that the treatment should be gradual and prolonged, rather than rapid.

Mr. Dacre Fox, who had assisted one of the family of Taylors, for many years "bone-setters," gave a very interesting account of the work of the firm. He said that in his experience "bone-setting" consisted largely in the treatment of recent fractures and sprains, and to only a limited extent in stiff joints. He urged surgeons to take more pains in the treatment of sprains, strains, and other apparently minor and simple injuries, which, if neglected, were often attended with grave inconveniences.

Mr. Pearce Gould, referring to cases in which the adhesions were mainly, if not entirely, extra-articular, said that it was of importance to break down all the adhesions at once, and then to persevere with passive movement to the full extent daily, and gradually bring up the nutrition of the wasted, disused muscles, by ac-

tive movements; perseverance on the part of surgeon and patient was very necessary.

At the first session of the SECTION OF OPHTHALMOLOGY, a discussion on the *Extraction of Senile Cataract in its Capsule* was opened by Dr. Edwyn Andrew, who described new instruments to separate the lens in its capsule, by tearing through the suspensory ligament. To obviate all pressure upon the globe during the operation, he has discarded all forms of speculum, and instead he passes a thread of catgut through one or both eyelids, and by it has the lid or lids held apart and away from the globe. Dr. Andrew advocated a more frequent resort to this operation. The general opinion elicited was, that this mode of cataract extraction is good in over-ripe cataract, and that it is easier to perform the older the patient, owing to the lessened resistance of the suspensory ligament in old age. In connection with this latter point, Mr. Priestley Smith stated the interesting fact that, having experimented on the extraction of the lens and capsule on the dead body in many cases, he had found it was much easier to do it in the corpses of aged persons. Mr. C. Macnamara, whose name is associated with this operation, and who has had a large experience of it, stated that he prefers it to any other in properly selected cases, and particularly in old people.

Next day Mr. Anderson Critchett read a paper on the *Treatment of Lamellar Cataract*, in which he advocated, in preference to removal of the lens, the formation of an artificial pupil by Tyrrell's hook.

Dr. Arthur Benson followed with a paper on the *Treatment of Partial Trichiasis*. The plan Mr. Benson recommends is to thrust one pole of an electrolytic machine into the eyelid, towards, or, if possible, into the erring hair-follicle, and to place the other pole on the forehead. The object is to destroy the hair-follicle, and the treatment is continued until the eyelash comes out easily with the root-sheath attached.

Mr. Nettleship and Mr. Priestley Smith related three cases of *Atrophy of the Optic Nerve*, followed by continuous dropping of watery fluid from the nose. The fluid possessed negative characters, and was not cerebro-spinal. In one of the cases there was evidence of a growth in the nose, and in another the nasal mucous membrane was thickened and excoriated, but whether as the cause or the result of the discharge was not known. In one case there were also curious nervous symptoms, drowsiness, and stupor, when the flow temporarily ceased; and during one of these attacks the patient died, but an autopsy was not obtained.

Mr. Priestley Smith showed at this meeting a *new registering perimeter*, which had the merits of simple construction and inexpensiveness.

Mr. Nettleship opened a discussion on the *Value of Eye Symptoms in the Localization of Brain Disease*. The principle points alluded to were unicocular papillitis, with evidence of intracranial disease; optic-atrophy, especially in relation to color-blindness; hemianopsia, and the recently recorded cases of hemiachromatopsia, the author thinking it probable that, in most cases of hemianopsia, the lesion is higher up than the optic tract; cerebral amaurosis from lesion of the occipital lobes; ocular paralyses, peripheral, nuclear, and cortical. Attention was called to several other conditions bearing more or less closely on the subject—e. g., "pseudo-gloma," with brain symptoms, recoverable infantile amaurosis, hydrocephalic choroiditis, megrim, complicated herpes of cranial nerves, and others. A short discussion followed, in which Dr. Edwyn Andrew, Dr. Hughlings Jackson, and Mr. Priestley Smith took part.

At the first meeting of the SECTION OF PATHOLOGY, Dr. Stephen Mackenzie opened a discussion on *Diabetes*. He specially referred to the cause of death in diabetes,

and the nature of diabetic coma, which he discussed, maintaining that it was complex, in the majority of cases being due to acetonæmia, and in only a small proportion of cases due to fat embolism. He agreed with others in believing this coma to be most common in young subjects. The statistics of the London Hospital were quoted to show the relative frequency of the various complications of diabetes. Dr. Saundby stated that although he had carefully looked for it he had not often succeeded in demonstrating fat embolism in death from diabetic coma. Dr. Shingleton Smith contended for the nervous origin of diabetes; and as one piece of evidence related a case of tumor in the cervical region of the spinal cord, which was accompanied with glycosuria.

At the same meeting Mr. Jonathan Hutchinson opened a discussion on the *etiology of tumors*, in which he insisted on their local origin, and dwelt particularly upon rodent ulcer and the precancerous stage of disease. Sir James Paget contended for the dual origin of malignant tumors, constitutional tendency, and local change. Mr. Butlin gave an excellent demonstration of the microscopical appearances of the chief forms of tumors. Dr. Thin showed some hairs in which trichophyton tonsurans had been artificially cultivated; and Mr. Abraham gave a very interesting demonstration of granulation tissue in a sponge network as obtained in the new process of sponge-grafting.

The closing meeting was opened by an exhaustive paper on *Rodent Ulcer* by Dr. Sangster, in which he clearly established the fact that the disease is not primarily connected with the sweat-glands, but that the morbid change starts from the Malpighian layer and outer sheath of the hair-follicles. Dr. Thin disputed this view.

The rest of the morning was occupied with a demonstration of various forms of *bacilli*, which excited a good deal of interest, and was one of the most successful events of the meeting. Dr. Heron showed Ehrlich's process of preparing tubercle bacillus, and he was followed by Dr. Gibbes, who demonstrated his process of preparing the same bacilli, which has already been described in THE MEDICAL NEWS (Aug. 19), and it was very evident that this process, while decidedly simpler than Ehrlich's, is also more effective, and is, therefore, more useful. Dr. S. Mackenzie also showed a specimen of tubercle bacillus prepared by Goldammer's method.

In the SECTION OF OBSTETRIC MEDICINE, Dr. Bailett read a paper on his cases of *Hysterectomy*, and in the subsequent discussion, Drs. J. Williams and Wallace strongly deprecated a frequent resort to this operation, asserting that the cases justifying it were but very few.

Dr. Edis gave a *précis* of the rational treatment for Menorrhagia, and Dr. C. H. Routh described a form of Dysmenorrhœa associated with Gonorrhœa.

The second meeting was entirely taken up by a discussion on *Subinvolution of the Uterus*, its causes, its relation to uterine disease, and its preventive treatment, which was opened by a paper by Dr. John Williams. He referred to the various methods for determining the progress of the involution of the uterus after delivery, to the work of Heschl, Dupaul, Sudukoff, Melson, and Sinclair. The uterus disappeared into the pelvis on or before the twelfth day after delivery, if involution goes on healthily. Taking this as a standard, Dr. Williams found, from the study of 113 cases, that the causes of involution are post-partum hemorrhage, retention of portions of placenta or membranes, lacerations of the perineum, pelvic inflammations and fever during the lying-in period. Lacerations of the cervix do not appear to give rise to it. Subinvolution causes menorrhagia, dysmenorrhœa, and prolapsus. The pelvic in-

inflammations so frequently associated with it are not its results. Its peculiar treatment consists in completely emptying the uterus after delivery, maintaining an efficient contraction of the organ, and in preventing fever. The best means of securing the last two are the frequent use of hot disinfecting vaginal injections, and perfect closure of tears of the vaginal orifice.

In the SECTION ON MEDICINE, Dr. Austin Flint read an able paper on the *Self-limited Duration of Pulmonary Disease*, and advocated the employment of the binaural stethoscope.

Dr. Balfour opened a discussion on Chlorotic Murmurs. Dr. C. T. Williams spoke on the Contagious Nature of Phthisis. On the last day, Dr. Leech opened a discussion on the Treatment of Cardiac, Hepatic, and Renal Dropsy.

STUDIES IN THE BERLIN GESUNDHEITS-AMT.

The Detection of the Bacillus Tuberculosis—The Investigation of Air, Water, and Soil.

GENEVA, August 12, 1882.

THE proverbial circumstances which alter cases, dispose as freely of the location of individuals, and so your correspondent found himself transposed from Berlin to Rome, and from Rome to Geneva, where alone there has been time offered for further communication. Everywhere over the face of the earth it was plain to see how hard is the struggle for existence among the children of men, and how oblivious the most of them become to anything but the wants of daily life. The struggle in politics which is just as bitter everywhere here as with us, is only another phase of this engrossing subject, and everywhere there is this struggle between those who have the power, including the means of subsistence, and those who have it not. Liberals and conservatives are the party names all over the old country, except in Rome. But in Rome it runs liberals and clericals, which latter party has, by the way, just suffered a general defeat.

These truly philosophic reflections would be out of place in a medical journal, were they not suggested by the observation that the same divisions obtain in the medical world, and that physicians, too, like other men, group themselves under the classes of conservatives and radicals, as regards every new discovery. The question is, not so much is the discovery true, but does it accord with preconceptions? So that it is useless to write the opinions of the so-called leading authorities. The truth is, that very few observers, indeed, are competent to give an opinion upon any subject connected with micro-organisms. And they who are competent are the most reticent, until they have subjected the question to individual study. I heard Dr. Koch one day deeply deplore the *laicisation*, if I may use the French term of his discovery, as something premature. "Such things require time," were his exact words, to be worked up by many observers from many different standpoints, and this whole method of investigation is not intended in any way to substitute or supplant, but to take its place modestly beside the other well-known and long-established lines of study, out of which it grew. The "newspaper notoriety" is a matter of regret, I happen to know, to the author of this new means of study, and it is a great injustice on the part of medical editors to attribute anything of it to Dr. Koch. A more modest, unpretentious, patient, plodding, worker, reverencing his profession, and his predecessors in it, seeking nothing but the truth, it has never been my fortune to have met.

But after all, what are these but trivialities to the question itself? Is it true? And how essential it is, if true, that it, with every detail, be immediately spread abroad, that every one who is competent may verify it, and utilize it for himself.

And let not the beginner be discouraged by failures in his first attempt. If the recognition of the bacillus tuberculosis, to confine ourselves for the present to this most important question, had been an easy task, it would have been discovered long ago. I have heard enough to know that if all the researches made in the Berlin laboratory alone could be published, it would make a contribution that would be a monument to the patience and persistence of mankind. There was the great advantage in the study of tuberculosis, over nearly every other one of the acute infectious maladies, that it is a disease which is common to most of the lower animals as well as to man; common to all in very much the same form, and of how very few of the other common infectious diseases could this be said? Consequently there was no limit to the field of experimentation. The first results were reached, however, by a process that was almost painful in the exercise of patience it required. Moreover the slightest flaw in the process would easily nullify the result. No sooner, however, had the essence of the disease been recognized than improvements began to show themselves at once in the technique of the process. So, for instance, it was soon found that the coloring solutions of Ehrlich saved a very great amount of time, and, in fact, these solutions are now in common use, in the detection of the bacillus tuberculosis. But a mere knowledge of this fact will not enable the beginner to find the objects he seeks. He must know the exact proportions in which these solutions are to be used. Thus to the saturated solution of aniline oil one hundred grammes by weight, he must add of the coloring matter solution (both fully described on previous occasions) eleven grammes. Such a nicety of combination might seem what Mr. Johnson would call "a scrupulosity," but long experience has shown that these are precisely the proportions which give the best results. This constitutes the first color, and if the exact proportion was not specified before, it was because its author had not yet made it public, a bar which is now removed. The specimen prepared, as thoroughly detailed in previous letters, is now treated to the decolorizing agents, and the subsequent staining with the aqueous solution of vesuvin, steps which I described with the utmost possible minuteness in my previous letters.

And when the specimen is thoroughly prepared, the next step is the instrument itself. A common microscope will not easily disclose the bacillus tuberculosis. It is done with the common lens every day, but by no means with the ease or distinctness shown under the new improvements. The microscope should possess the Abbé illumination apparatus, which is a series of lenses under the stage, and be provided with the oil immersion lens. The use of the oil immersion lens is just as simple as the ordinary lens, the difference being that with the former a drop of the oil of cedar is let fall upon the cover glass and the lens enters it in bringing the object to a proper focus. Then in the use of the color tests, that is, in the recognition of color and not of structure, the diaphragm is not used at all. I have written all these points with perhaps superfluous minuteness, in order to put the study of the subject in the hands of the beginner.

But besides all these preparations of the specimen, and besides the possession of the best possible instrument, there is another requisite which is a *sine qua non*. There must be an eye at the other end of the microscope which can distinguish what it sees. Right here, I may say, however, that very little practice will enable any one to recognize the bacillus tuberculosis. Because it is not the fine question of structure, but the gross question of color. A violet or a blue body in a clear brown field is such a very distinct object that a few observations will soon pick it out. Any body who can

recognize a blood corpuscle can recognize the bacillus tuberculosis, although it is rod-shaped of course, and not round, and is but about one-fourth the size of a blood corpuscle. But it is not so much the shape or structure, I may repeat again, as the color, which will at once strike the eye. Let the student recognize the presence of it first, and he can soon work out its characteristics later.

I began this letter with the intention of describing the means of analyzing the air, water, and soil which are adopted in Berlin in the detection of bacteria, micrococci, and bacilli, which elude any other means of observation. These investigations are full of promise in the study of the etiology of all the acute infections, and have already yielded the very important conclusion, that it is the air, and not so much the water or the soil, which chiefly contains and distributes the pathogenic organisms.

Many new improvements have been introduced in the study of the mycology of the air, the chief of which consists in the use of a long glass cylinder drawn to a very narrow tube at one end and covered with a rubber shield at the other.

The air of a given locality is drawn through the cylinder by a pair of bellows. The cylinder rests horizontally, of course, and it contains along its canal a layer of the sterilized gelatine mixture, which is poured in hot and solidifies in cooling. A given quantity of air having been drawn, as stated, through the tube, the rubber shield is attached to one end, and the other open narrow end is closed by a plug of sterilized cotton. In the course of twenty-four hours the germs begin to show up on the surface of the gelatine in the form of the well-known opacities, "vegetable moulds," which first appear in isolated spots, to gradually increase in size, and finally coalesce. Before this coalescence, however, a fragment may be removed from any opacity and studied under the microscope, where its character as micrococcus, bacillus, or simple *pilze* may be readily recognized. Quite a picturesque appearance these tubes present at a certain stage of development of the germs, spotted and dotted as is the surface, and sometimes the depths of the gelatine culture substance. Of course, in a day or two longer, the spots coalesce, the gelatine is fluidified, decomposed, and further observation rendered *nil*. But this process is easily retarded by placing the cylinders in an ice-chest. It is always seen that the number of germs is greatest at or near the entrance into the cylinder, that is, that the germs begin to fall at once upon the surface of the culture substance, to become fewer and fewer towards the rubber or bellows end. But isolated germs are carried completely up to the bellows end, as is seen by their development into patches or opacities in the course of a few days. The number of these opacities in the whole cylinder gives of itself a coarse idea of the purity or impurity of the air, and the examination of them under the microscope reveals their precise character.

In the examination of water and soil, resort is had to a different procedure. The culture substance is poured upon glass slides, where it solidifies. The gelatine is now inoculated, if I may use the term, with the water on the earth, and a number of the slides are banked up so that each is separate, of course, and the whole bank, containing perhaps twenty slides, each of which has three inoculations, is placed in the moist chamber described in the treatment of the potato. Here, too, in the course of twenty to thirty hours the opacities begin to present flocculi, as it were, which gradually increase in size. Often enough the "flocculi" are seen under examination by the microscope to be composed of several kinds of micrococci and bacilli, or are commingled with the common vegetable *pilze*. Then all

that is necessary to get a variety pure is to reinoculate from the purest place another set of slides, and thus to finally arrive at the isolation of individual germs.

One of the most important conclusions reached by this means of study, was the discovery of the fact that the upper layers of the soil are always rich in bacteria and bacilli, while micrococci are present in much less degree. With reference to this interesting point, I may as well quote literally from Dr. Koch's report to the Health Office some time ago.

"Samples of soil from very filthy places, for instance, from accumulations of manure, showed an excess of micrococci, with the presence also of the vegetable fungi (*schimmel pilze*), but this is always only a local phenomenon. On the other hand, the upper layers of cultivated soil (horticulture and agriculture) show constantly and in great quantity the presence of bacilli. Such organisms were found in the soil of the garden of the veterinary school at Berlin just as abundantly as in the earth of a long-disused burial ground, or as in samples of soil taken from fields and gardens far removed from inhabited places." The author goes on to state that when these samples of earth are allowed to dry, the few micrococci present disappear in the culture substance, but the bacilli remain just as abundantly as before the desiccation. Hence it is concluded that the micrococci soon perish when dry, while the bacilli in the form of spores still remain alive. And this view is confirmed by the fact, as proven by experiments with disinfection by heat, that the germs of bacilli withstand a degree of heat which is fatal to the maturer forms. The author considers it probable that these bacilli spores do not spring up in the earth where they are found, but that they are wafted thither from distant products of decomposition, or are carried over in the dust of the air. It was by means of these investigations that the author arrived, also, at the very curious fact that all micro-organisms, however abundant on the surface of the earth, gradually diminish in its depths, so that at the short distance of one metre (40 inches) the earth is almost free. Even in the middle of Berlin samples of earth at the depth of one metre were entirely free from bacteria or bacilli, and showed upon the surface of the gelatine culture substance but very few scattered colonies of the smallest micrococci.

As to these terms, bacteria, bacilli, and micrococci, I may say that the lines drawn in Berlin are rather arbitrary. At least this is the case with reference to bacterium and bacillus. Of course, the micrococcus is always round and is always small, though different species vary much in size. The bacterium is a sort of transition stage between the micrococcus and bacillus, that is, it is, let us say, egg-shaped or elliptical. Whereas the bacillus is always the little rod. These are the gross differences as regards size and shape that are coming more and more into use in the description or differentiation of micro-organisms.

But this means of investigation is by no means limited to the air, the water, and the soil. It has a range which is almost infinite in extent. The author himself has suggested, and some of his co-workers have undertaken, the study of various articles of commerce (money, for instance) and of food. Milk offers a field of study by itself, and the mysteries of meat (sausage) poisoning, not due to trichinosis, may be made to display themselves upon the little surface of these gelatine slides.

J. T. W.

NEWS ITEMS.

THE BILLS FOR ATTENDANCE ON PRESIDENT GARFIELD.—A Washington dispatch to the Philadelphia *Times*, says that

"Drs. Bliss and Reyburn have at last filed their

claims before the Board of Audit, designated by Congress to settle claims for expenses incurred during the illness and death of the late President Garfield. The former desires \$25,000 for his services, and the latter \$10,000, which, if allowed, would exhaust the amount to be paid for medical attendance. It was originally proposed to appropriate \$75,000, to cover all the expenses, but the Senate reduced the amount to \$57,500, which was concurred in finally by the House. Of this, \$35,000 was to be distributed among the medical attendants, and the remainder among such other claimants as might present satisfactory evidence in support of the demands.

"Before filing his claim before the Board of Audit, Dr. Bliss notified Drs. Agnew and Hamilton that he intended to ask for \$25,000, and requested to be informed as to their demands. Neither of these gentlemen has replied, but it is understood that their claims will be for \$15,000 each. Dr. Reyburn in his bill claims compensation at the rate of one hundred dollars per day for sixty-seven days, and a like amount for the alternate nights spent at the late President's bedside. Dr. Boynton and Mrs. Edson are not recognized by the attending physicians in any other light than nurses, although Dr. Agnew has requested a decision from the Board, as to whether it will recognize the two attendants as beneficiaries under the head of medical attendance.

"Dr. Bliss, in his statement, tells how the physicians were called into the case. Regarding himself, Dr. Bliss says that he was placed in charge, and was daily and nightly in attendance. The unremitting strain upon mind and body, accompanied by loss of sleep, produced the usual results, and besides losing thirty-eight pounds in weight, the doctor says that the sepsis of the patient was communicated to him, causing secondary abscesses, which lasted for upwards of three months.

"Dr. Bliss further sets forth that, in estimating the value of his services, the degree of responsibility should be considered, for, besides a skilful conduct of the case, he and his assistants were burdened with the hopes and fears of the nation. He had to give up his private practice, and when he resumed it again he was so prostrated as to be able to do but a small part of his usual labor. At the time the President was shot his professional income was \$1,500 per month, and the first month he resumed practice after the President's death, his income was but \$1,000. He estimates that his services to the President cost him \$15,000, and insists that he should not only be reimbursed, but compensated, and that he is entitled to \$25,000."

TRI-STATE MEDICAL SOCIETY.—The eighth annual meeting of this society will be held at Terre Haute, Ind., September 26, 27, and 28, 1882.

GARFIELD MEMORIAL HOSPITAL.—On August 1st, according to the *Lancet*, a meeting was held in Queen Square, Bristol, to promote a movement for the erection of an International Hospital at Washington, in memory of the late President Garfield.

COMPULSORY VACCINATION IN SWITZERLAND.—The French journals announce that compulsory vaccination has just been rejected in Switzerland by a *plébiscite*.

PROF. VON LANGENBECK held his last clinic on Saturday, the 29th of July. The amphitheatre was dressed with greens and flowers. The former assistants of Prof. Langenbeck in Kiel and Berlin have presented him with a handsome silver table service.

ENGLISH HOSPITAL IN JERUSALEM.—The Sultan of Turkey has given a site in Jerusalem, for the purpose of erecting a hospice and ophthalmic dispensary, under the auspices of the English branch of the Order of St. John.—*Louisville Med. News*, August 26, 1882.

LITERARY NOTES.—Dr. Habershon's well-known work on *Diseases of the Abdomen* has been translated into Spanish by Dr. Jeinenez Verdigo, of Madrid.

GLASGOW MEDICO-PSYCHOLOGICAL ASSOCIATION.—At the annual meeting of the Medico-psychological Association of Glasgow, recently held, Prof. Gairdner was elected President, as successor to Dr. Hack Tuke.

THE UNIVERSITY OF BERLIN.—Prof. Du Bois-Reymond has been elected Rector of the Berlin University for the next two semesters, and Prof. Bardeleben Dean of the Medical Faculty.

HIP-JOINT AMPUTATIONS.—During the past month, three cases of amputation at the right hip-joint were performed in England, with the aid of Mr. Davy's lever for controlling hemorrhage. A case where Mr. McLaren, of Carlisle, operated, lost two ounces of blood; a second patient, under Mr. Cowell's care, at the Westminster Hospital, lost three ounces; and the third case, where Mr. Paul Swain, of Plymouth, performed amputation with the assistance of Dr. Bampton, lost but one ounce and a half. All these patients are progressing favorably.—*Brit. Med. Journ.*, August 12, 1882.

THE COMMON MUSHROOM.—PROF. PONFICK, of Breslau, has been making experiments on the common mushroom, and tells us in detail, and with the authority of science, what was somewhat vaguely known before, viz., that all common mushrooms are poisonous, but cooking deprives them in a greater or less degree of their poisonous qualities. The repeated washing with cold water, which they usually undergo to clean them, takes away a portion of the poison, and boiling does the rest; but the water in which they have been boiled is highly poisonous, and should always be carefully got rid of. Dried mushrooms are still dangerous for from twelve to twenty days; they require to be dried for at least a whole month, and are only really safe after four months' drying.—*Med. Times and Gaz.*, August 12, 1882.

CIRCULATION OF THE BRITISH MEDICAL JOURNAL.—According to the report of the Council of the British Medical Association, at the meeting on August 8th, the weekly issue of the *Journal* now numbers 11,000 copies.

MONUMENT TO SCHUTZENBERGER.—The pupils and colleagues of the late PROF. SCHUTZENBERGER, of Strasburg, have erected a monument and bust to his memory. The bust was presented on July 6th, in an Address by Prof. Hergott, of Nancy.

"ST. JACOB'S OIL."—"St. Jacob's Oil" appears to be a feeble and badly made aconite liniment, and it consists mainly of water, ether, alcohol, turpentine, and a small proportion of aconite, with red coloring matter. Its whole function is to make money for the enterprising merchants who own it, and in this it is by no means a delusion or a snare.—*Squibb's Ephemeris of Materia Medica*, July, 1882.

A CURIOUS PHENOMENON.—The French journals, under this title, describe a flageolet player who charmed all his hearers by his musical performances at the recent fair held at Neuilly, an environ of Paris. He had formerly suffered from an attack of diphtheria. Tracheotomy was performed, and the silver tube which was introduced at the time of the operation, and kept stationary by means of a circular pad, now serves the musician of Neuilly as a natural aperture through which he breathes, and so successfully that his flageolet playing was enthusiastically applauded by all present.—*British Medical Journal*, July 22, 1882.

MATRIMONY IN JAPAN.—The Japanese Government has lately drafted new regulations for marriages. According to these, no man in the empire will henceforth be permitted to marry before arriving at the age of twenty. Women, however, are to be privileged to marry at eighteen.—*Med. Times and Gaz.*, July 29, 1882.

THREE HUNDREDTH ANNIVERSARY OF THE UNIVERSITY OF WÜRZBURG.—The University of Würzburg celebrated its three hundredth anniversary by a festival held from August 1st to 4th. Among the celebrities who received honorary degrees were Prof. Huxley and Sir James Paget. In his letter to the *Lancet*, Dr. Russell Reynolds, who represented the University of London, remarks on the stately decorum with which the whole of this proceeding was gone through. There was no applause either by voice or hand or foot; and there was profound, even solemn, attention directed to every word that was uttered. Even when Virchow and many other distinguished speakers left the rostrum there was no applause, but there was a slight vocal cheer when Canon Stubbs, of Oxford, finished his well-phrased speech, and when the representative from Amsterdam concluded his. Still further, it was very interesting to observe the entire absence of anything that elicited either a laugh or even a smile; there was throughout a pleasurable, not grim, sense of seriousness in the whole proceeding, such, as it seems to me, befits a great university act; and this was the more striking when contrasted with the overflowing hilarity at private entertainments, and in all the social gatherings of friends. At the festal dinner, Prince Theodor Carl (the cousin of the King), proposed the health of his Majesty. This was received with appropriate honors, the Prince alluding to his own personal relationship to the medical profession, he having passed through a course of medical instruction, and to the present time occasionally seeing patients in consultation.

Then followed a long pause between fish and soup, during which the talk of the guests and the tones of the band rendered it very difficult to do more than catch a few words from the nearest neighbors. Then, just as some of the visitors had swallowed a few mouthfuls of fish, silence was again called, the Rector rose, the waiters stopped, the guests stood up wiping their mouths, and the health of Kaiser Wilhelm was given and received with all honors, while the band played the familiar air of "God save the King."

Toast after toast followed, and pause after pause ensued, until seven o'clock was reached, when the guests departed, many to see their friends, many to the theatres.

In the evening there was a great gathering of the students and their friends, and of all who had come to the festival, in the great Ludwigshalle. If the official performances were singularly silent, this cannot be said of the "Banketfest der Studentschaft," the hilarious mirth of which was audible far beyond the limits of the hall. But good humor prevailed throughout, and the festivities were not prolonged until an unduly late hour.

Dr. Reynolds was sorrowful with regard to the painful spectacle of the gashed and disfigured cheeks, brows, and noses of dozens of students who were going about Würzburg and Heidelberg. Many had scars, of three to five inches long, on either cheek, some had slit noses, and were adorned with plaster as their only "decoration;" while some grown-up men were to be seen, who must have left their colleges for ten or fifteen years, still bearing these ghastly signs of early folly.

The man who has received his wounds in honest fight for his country or his home may be proud of what he has done, but he is not vain of his wounds. But

these young men, of seventeen to twenty years of age, stamp about the street, or, curiously enough, ride in carriages behind a pair of horses, with their disfigured, and often injured heads, tossed high in the air, as if they thought it a fine thing to make day as well as "night hideous" in remembrance of something which has not been an honorable quarrel, but a form of strife for which few can entertain any feeling of respect.

DEATH OF DR. PIDOUX.—DR. PIDOUX died on the 4th inst., at his residence in Paris, from diabetic gangrene. He was more than an octogenarian, took his degree in 1835, and has been a member of the Academy of Medicine since 1864. Dr. Pidoux has written a great deal; but his principal work is his "*Traité de Thérapeutique et de Matière Médicale*," the first edition of which was published in 1839, in conjunction with the late Dr. Trousseau. He was for a long time principal physician at the Eaux-Bonnes, and was a great authority on matters connected with the therapeutic action of sulphurous waters. He was also Officer of the Legion of Honor.—*Lancet*, August 12, 1882.

DEATH OF DR. MCEWEN.—We regret to learn the death of DR. MCEWEN, of Chester, England, who became personally known to many American physicians during his visit to this country last summer.

DEATH OF PROF. HILDEBRANDT.—Our German exchanges announce the sudden death from apoplexy of PROF. HILDEBRANDT, the eminent teacher of gynecology in Königsberg.

HEALTH IN MICHIGAN.—Reports to the State Board of Health, for the week ending August 19, 1882, indicate that dysentery and typhoid fever have increased, and that bronchitis and influenza have decreased in area of prevalence.

Including reports by regular observers and by others, diphtheria was reported present during the week ending August 19, and since, at 14 places, scarlet fever at 9 places, measles at 4 places, and small-pox at 8 places, as follows: at Montrose, Genesee County, August 15; in Danbury Township, Ionia County, August 16; at Grand Rapids (1 new case), August 19; at Marquette (1 case, convalescent), August 20; at Portland (1 new case), August 21; in Walker Township, Kent County, and Orange and Sebewa, Ionia County, August 21.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM AUGUST 22 TO AUGUST 28, 1882.

BILL, J. H., *Major and Surgeon*.—Granted leave of absence to Dec. 1, 1882.—S. O. 196, A. G. O., August 24, 1882.

ALDEN, CHAS. H., *Major and Surgeon*.—Granted leave of absence for three months.—S. O. 196, c. s., A. G. O.

MUNN, C. E., *Captain and Assistant Surgeon*.—The leave of absence granted him in S. O. 147, July 28, 1882, Department of the Missouri, is extended two months.—S. O. 196, c. s., A. G. O.

OWEN, JR., WM. O., *First Lieutenant and Assistant Surgeon*.—Assigned to temporary duty at Vancouver Barracks, Wyoming Territory.—S. O. 114, Department of the Columbia, August 11, 1882.

MACAULEY, C. N. B., *First Lieutenant and Assistant Surgeon*.—Assigned to temporary duty at Fort Columbus, New York.—S. O. 147, Department of the East, August 25, 1882.

THE MEDICAL NEWS will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.

Local papers containing reports or news items should be marked. Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS should be addressed to No. 1004 Walnut Street, Philadelphia.